Making Sense of Debt Financed Education from the Perspective of Young Adult Student Loan Borrowers:

Does higher education still have value and meaning if you have to repay loans?

A Dissertation

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Dedication

For my mother and father who taught me to seek truth:

M. Candice & William E. (Bill) Burcher.

Abstract

Two studies were conducted to better understand the association between higher education and adult success from the perspective of young adult student loan borrowers five years after graduating. Data for both studies were drawn from the Arizona Pathways to Life Success (APLUS) project. This sample borrowed during a period of changing economic conditions (i.e., 2008-2016). In the first study, I used a convergent parallel mixed methods approach to investigate if borrowing to pay for college alters the higher education social contract and if borrowers would advise others to make the same investment. The qualitative analyses revealed five emergent themes (e.g., Plan ahead; Make decisions based on future outcomes; Look for alternatives to university; Repaying loans; and Social comparison and character statements) and three affective tones (e.g., negative, positive, neutral). Borrowers offered practical financial advice, emphasized being responsible, and focused on career planning and financial security. Key findings suggest the higher education social contract may be changing for first-generation college students.

In the second study, I examined the association between meaning in life (MIL), as a subjective marker of a successful adult transition, and satisfaction in multiple domains (e.g., life, job, financial), and investigated if self-concept mediated the association under two conditions: student loan borrowers who had paid off their loans and those who are still in the repayment process. Borrowers who paid off their loans within five years of graduating, reported higher levels of satisfaction, self-concept, and income, but their MIL was similar. Self-concept (i.e., self-esteem and financial self-efficacy) partially mediated the association, although the process operated differently for the two groups, suggesting

that student loan debt may be undermining their self-concept. The current research fills a gap in the student loan research literature by examining the long-term repayment experience of borrowers while they simultaneously managed full-time adult roles and responsibilities. Efforts should be made to support borrowers in repaying their loans while also supporting their well-being, career choice, and financial stability.

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Chapter 1

General Introduction

The expectation that education leads to increased human capital, and with it entrance to the middle-class and access to better jobs, is well-supported in the extant literature (Baum & Ma, 2007; Baum et al., 2010, 2013; Carnevale et al., 2013; Ma et al., 2016). On average, compared to their peers without a college degree, college graduates have lower levels of unemployment (Shierholz et al., 2013), higher levels of financial independence (de Bassa Scheresberg et al., 2014; Xiao et al., 2014), and higher household income (Abel & Deitz, 2014; Bialik & Fry, 2019; Cilluffo, 2017; Fry, 2014). Higher education may provide access to more opportunities which contribute to a career that offers meaning and fulfillment (Ma et al., 2016; O'Connor & Raille, 2015; Park et al., 2010; Parker et al., 2016). Compared to those without a degree, a college education is also associated with higher levels of meaning in life and higher life satisfaction (Park et al., 2010); living a meaningful life is important for psychological well-being (Ryff & Singer, 1998).

Although today's young adults are more educated than previous generations (Bialik & Fry, 2019), many of them had to borrow to pay for their education (Brown et al., 2019; Cilluffo, 2019; Johnson, Gutter, et al., 2016). The total student loan debt now exceeds $1.54 trillion spread among 43 million borrowers, an increase of more than 380% since 2004 (Federal Reserve Bank of NY, 2020). Nearly 40% of post-college young adults have student loan debt (e.g., 20-29 years old; Ratcliffe & McKernan, 2013) averaging $32,731 per student (Federal Reserve Bank of NY, 2020). At the same time, the uncertainty in the labor market following the Great Recession (2007-2009; NBER,

2010) has created challenges for many young adults in securing financially stable jobs (Kalleberg, 2013; Setterson, 2012; Shierholz et al., 2013; Sortheix et al., 2015; Stein et al., 2011). Young adults graduating after the Great Recession were more likely to be underemployed compared to previous generations (Abel et al., 2014; Shierholz et al., 2013), which may have been especially problematic for those responsible for repaying their student loans. Compared to their debt-free peers, college graduates with student loan debt have lower net worth and lower prospects for future wealth (Deller & Parr, 2021; Elliot & Lewis, 2015). In the context of increasing debt-financing, does higher education still have value and meaning when you have to repay loans? This project was designed to begin to address this question.

Current Project

Two studies were conducted to better understand the association between higher education and adult success from the perspective of young adults who borrowed to pay for their education during a period of changing economic conditions (i.e., 2008-2016). In the first study, I relied on the social contract theory to explore if the use of student loans affected young adults' perceived value of education (Dworkin, 2012; Rubin, 2012). The social contract theory assumes that individuals voluntarily participate in implicit agreements that represent underlying social rules based on shared values (Freeman, 1990; Weber, 2009). In this sense, when a young adult decides to go to college, they are choosing to participate in the social contract that education leads to better jobs and financial security. However, the young adults in the sample for this study made decisions to borrow for their education prior to the Great Recession when there were few studies on the longer-term impact of student loan debt. Using qualitative data, I analyzed student

loan borrower responses that provided advice to incoming college students about using student loans to pay for their education. Based on their repayment experience five years after graduating, does their advice suggest that they would do things differently?

Repaying student loan debt while also juggling the financial demands of adult life is challenging (Lusardi et al., 2016; Walsemann et al., 2015), but does repaying student loan debt have any effect on life meaning or satisfaction? To begin to answer this question, I conceptualized meaning in life as a subjective marker of a successful adult transition and examined the associations between meaning in life and domain satisfaction (i.e., life, job, financial) among student loan borrowers (Mayseles & Keren, 2014). Because few studies have examined the mechanisms that may explain these associations (Hooker et al. 2018; Miao & Gan, 2019), I also examined self-concept as a potential mediating mechanism. Finally, because student loan repayment is often accompanied by worry and stress (McLean-Meyinsse, 2019), I tested if the mediating mechanism differed by loan repayment status (i.e., loans paid off and loans outstanding).

Data for both studies were drawn from the Arizona Pathways to Life Success (APLUS) project, a longitudinal study following a cohort of over 2,000 first-year college students enrolled full-time at a public university in spring 2008 (see Shim et al., 2010 for detailed information about the study design). After receiving IRB approval, the entire freshman class (approximately 6,000 students) was invited to participate in the study by completing an online or paper-and-pencil survey. Recruitment methods included university email accounts, campus media, flyers, and class announcements. The study design included four waves of data collection: Wave 1 (Spring 2008, participants were 18-21 years old), Wave 2 (Fall 2010, participants were 21-24 years old), Wave 3 (Spring-

Summer 2013, participants were 23-26 years old), and Wave 4 (Spring-Summer 2016, participants were 26-29 years old). Of note, this longitudinal study began prior to the Great Recession when student loan debt was not the financial concern that it is now. This cohort of young adults is also part of the Millennial generation, defined as those born between 1981-1996 (Bialik & Fry, 2019), who graduated from college when job prospects were limited and unemployment was high (Bialik & Fry, 2019; Kalleberg, 2013; Shierholz et al., 2013). Although longitudinal data were available, I focused on cross-sectional data from Wave 4 because my interest was in understanding the experience of student loan repayment in the context of managing other demands of adult life. That is, the extant research on the student loan experience has been conducted with college student samples (Aronson, 2016; Cilluffo, 2017; Froidevaux et al., 2020; Johnson, O'Neill, et al., 2016; McLean-Meyinsse, 2019; Tran et al., 2018), who were not simultaneously expected to manage full-time adult roles and responsibilities. The present study addressed this gap by focusing on young adults who used student loans and have paid off or were currently repaying the loans after graduating from college.

Significance of the Project

This dissertation research sought to understand more about the experience of those living with their choices in the context of the normative expectations of life quality among college-educated young adults (e.g., job and financial stability). A disproportionate number of contemporary young adults struggling with student loan debt are young adults from working and lower-class families (Addo et al., 2016; Baker et al., 2017; Furquim et al., 2017). Consistent with the extant literature, previous studies using this dataset (e.g., Cherney et al., 2019; Shim et al., 2019) revealed that a greater

proportion of Hispanic/Latino, African American/Black, first generation, and young adults from lower socioeconomic status families were more likely to take out student loans. Thus, while higher education has historically been viewed as a pathway to middle-class status (Elliott et al., 2014), the long-term financial consequences of student loan debt could actually exacerbate economic inequality (Addo et al., 2016; Carlson, 2020; Jackson & Reynolds, 2013). By focusing solely on the experiences of student loan borrowers with a college degree from different sociodemographic backgrounds, this study makes a unique contribution about a growing concern regarding higher education and economic inequality from the perspective of young adult student loan borrowers.

Chapter 2

STUDY 1: "WITH THE DEBT I AM IN." A STUDY OF YOUNG ADULTS LIVING WITH STUDENT LOANS

Introduction

The benefits of higher education are well-documented (Baum & Ma, 2007; Baum et al., 2010, 2013; Carnevale et al., 2013; Ma et al., 2016). On average, college graduates, compared to their peers without a college degree, are more likely to be employed (Shierholz et al., 2013) and have higher household incomes (Cilluffo, 2017; Fry, 2014). The income gap between those with a four-year college degree and their non-college educated peers has been steadily increasing (Abel & Deitz, 2014; Parker, 2019). In the United States, enrollment in postsecondary institutions increased by 28% between 2000 and 2016 (NCES, 2018). In fact, as the most educated generation, 39% of Millennials, those born between 1981 and 1996, have a bachelor's degree compared to previous generations at the same age (e.g., on average 23-28 years old; 29% of Generation X, 25% of Baby Boomers, 15% of Silent Generation; Bialik & Fry, 2019). Yet, a changing labor market following the Great Recession (2007-2009; NBER, 2010) has made it difficult for many college graduates to find financially stable jobs (Kalleberg 2013; Stein et al., 2011). Likewise, the cost of college at public institutions rose 31% between 2006-07 and 2016-17 (e.g., tuitions, fees, room and board; NCES, 2019). But with decreased state funding for public universities (Mitchell et al., 2016), more students are borrowing to pay for their education. Compared to past generations, recent college graduates were more likely to work part-time and hold low-paying jobs (Abel et al., 2014; Shierholz et al., 2013).

Young college graduates with student loans were almost twice as likely as their counterparts without loans (21% vs. 11%) to have a second job (Cilluffo, 2017).

Thus, some have argued that a new social contract has back-loaded the good life (Dworkin, 2012): the payoff in the higher education social contract is delayed for those who debt-financed their education. Although a college degree leads to increased future opportunities for success, does student loan debt undermine the higher education social contract? Or is a debt-financed education an example of a changing social contract? Guided by social contract theory, I used a convergent parallel mixed methods approach to explore these questions using qualitative and quantitative data collected simultaneously, analyzed separately, and then merged (Creswell & Plano Clark, 2018). The participants for this study were drawn from a longitudinal study investigating the associations between young adults' financial behaviors and adult life outcomes (Shim et al., 2010) who took out student loans and experienced the repayment process (N=282; aged 26-29). The participants entered college prior to the Great Recession (2007-2009; NBER, 2010) and graduated college in 2011 when there were fewer job opportunities. Because the participants transitioned from college to career while repaying student loans, this study adds to the literature on the costs and benefits of higher education, providing a retrospective account of their experience. The findings of this study are discussed in the context of the higher education social contract.

Theoretical Framework

Social Contract Theory

A primary assumption of social contract theory is that implicit agreements underlie social rules and individuals voluntarily participate in the social contract with the

promise of mutual benefits that are situational and historical (Freeman, 1990; Weber, 2009). Inherent in a social contract is a shared normative understanding of the responsibilities of and the benefits to each party in the contract that shape individual behavior (Rubin, 2012). Although these shared norms and values may be widely held, they are typically unwritten (Jos, 2006; Kimmel et al., 2011). Nevertheless, individuals voluntarily participate in social contracts based on expectations and past collective experiences of others in society (Rubin, 2012).

There is some evidence that young adults view the investment in education as a requirement for getting a "good job." O'Connor and Raile (2015) reported that for young adults the two most common characteristics of a real job were that it provided financial autonomy and required a college degree. From this perspective, the decision to borrow to finance education stems from the prevailing belief that getting a college degree is an essential investment in one's future (Chudry et al., 2011; Johnson, Gutter, et al., 2016; Johnson, O'Neill, et al., 2016). In this sense, investing in higher education in exchange for future employment security and financial stability is a form of social contract (Rubin, 2012). Young adults who take out student loans to pursue the education-career pathway believe that the investment will pay off through better employment opportunities (i.e., a shared understanding of a social contract). Borrowing to finance education is therefore part of an individual's responsibility to fulfill the social contract. However, the unexpected increase in unemployment and an overall decrease in the quality of employment held by recent graduates compared to past generations (Abel et al., 2014), may call into question the perceived value of a college degree - at least for those who have to repay student loans.

Literature Review

The Education-Career Pathway

A college education can buffer the negative effects of an economic downturn because there are more job opportunities for those with a college degree compared to those without a college degree (Minaya & Scott-Clayton, 2017; Schwandt & von Wachter, 2019). A longitudinal study of a cohort of adults working before, during, and after the Great Recession showed that irrespective of education level, all adults perceived having lower job security and were working fewer hours during the Great Recession (Vuolo et al., 2016). However, the researchers also found that those with a Bachelor's or Associate's degree were more likely to be employed and were more likely to consider their job a career compared to those without a degree. This suggests that a college degree provides benefits, even during a challenging economy. Yet, there is some evidence that college graduates entering the job market during a bad economy also suffer long-term negative career outcomes (Altonji et al., 2016; Kahn, 2010; Oreopoulos et al., 2012). For young adults entering the job market during the end of the Great Recession (2009-2011), the unemployment rate for college graduates in their early twenties was higher (10%) compared to college graduates in their late twenties (4%). In addition, many of the jobs attained by younger college graduates did not require a college degree, reflecting an increase in underemployment among recent graduates (Abel et al., 2014). Financial instability early in one's career is not a new phenomenon, but for Millennials the situation has been particularly challenging (Settersten, 2012; Sortheix et al., 2015; Stein et al., 2011). This may have been the case for the participants in the present study.

The Total Cost of a Debt-Financed Education

The longer-term impact of student loan debt is becoming more apparent: compared to their debt-free peers, Millennial college graduates with student loan debt have lower net worth, compromising their future wealth accumulation (Deller & Parr, 2021; Despard et al., 2016; Elliot & Lewis, 2015). Student loan debt has impacted Millennial's financial decisions (de Bassa Scheresberg et al., 2014), such as when to get married and have children (Bozick & Estacion, 2014; Doran et al., 2016), buy a house (Mezza et al., 2020), or save for retirement (Rutledge et al., 2016). And, the impact of student loans is not just financial. Research consistently demonstrates the connection between higher financial stress and poor health outcomes (Richardson et al., 2017; Sweet et al., 2013), with an increasing focus on the burden of student loans. Specifically, student loan debt has been associated with poorer mental health (Walsemann et al., 2015); difficulty in degree completion (Robb et al., 2012); and poorer self-rated general health (McLean-Meyinsse, 2019; Tran et al., 2018).

Student loan debt may also influence young adults' career decisions. Some young adult borrowers have reported choosing careers based on their student loan debt (Baum & O'Malley, 2003; Schrag, 2007). Rothstein and Rouse (2011) demonstrated that as student loan debt decreased, college graduates were more likely to choose lower-salary jobs in public service industries. Similarly, when offered tuition subsidies rather than student loan financing, lawyers were more likely to choose a job in a public interest law firm (Field, 2009). Student loan debt may influence what major students choose in college (Quadlin, 2017). It is also possible that student loans may have some young adults rethinking their career choice (Doran et al., 2016).

The Distribution in Debt-Financed Education

There is some evidence suggesting that the costs of student loans and the financial payoff of investing in a college degree using student loans is not distributed equally (Dwyer, 2018; Tran et al., 2018; Webber, 2016). One study demonstrated that Black young adults carried substantially more student loan debt than their White peers (Addo et al., 2016) and this debt disparity may perpetuate racial inequities (Houle & Addo, 2019). In addition, first-generation students were more likely than continuing generation students to rely on student loans for their education (Lee & Mueller, 2014), and take out larger loan amounts (Furquim et al., 2017). Students from lower-resourced families were more likely to use student loans and less likely to graduate (Dwyer et al., 2012; Hiltonsmith, 2013). As an exception, Tran et al. (2018) found no significant differences in the amount of student loan debt held by Hispanic/Latino Americans and Black/African Americans compared to their White peers, although they did report more stress due to student loans. The disparity between those who used student loans and those who did not suggests a difference in the value of education for some groups. Because minority and low-income students are less likely to rely on families for financial support (Addo et al., 2016; Baker et al., 2017; Jackson & Reynolds, 2013; Quadlin, 2017), it may be that the social contract (i.e., costs and outcomes of using student loans to finance education) is changing, but only for some students.

A Changing Social Context?

Previous research on young adults' attitudes and feelings about student loans is most often drawn from college student samples who were not yet repaying student loan debt. While college students recognized the potential increase in earning power from

having a college education, they "felt that they had no other choice but to borrow money to invest in their human capital to secure a better future" (Johnson, O'Neill, et al., 2016, p. 193). In an extensive review on the purpose of higher education, Chan (2016) showed that students expected intrinsic and personal benefits (e.g., help finding a good job) while educators viewed education as providing more societal benefits. In a qualitative study of psychology graduate students, in addition to financial stress due to student loans, the students expressed both dissatisfaction with their income-to-debt ratio and concerns about delaying life milestones (e.g., getting married, having children; Doran et al., 2016; Velez et al., 2019). In choosing a career to help others, these students felt that they were ill-informed about the impact of student loan debt on their own financial situation. Cilluffo (2017) portrays the "downbeat assessment" of student loan holders while Aronson (2016) described students' attitude as a "culture of despair." This highlights the need to study the effects of student loans from the perspective of those who have experienced both the borrowing and repayment experience and are living with their choices.

The Current Study and Analysis Plan

The purpose of this study was to examine the higher education social contract from the perspective of young adults with first-hand experience in borrowing and repaying student loans (N=282; aged 26-29). Specifically, would student loan borrowers advise others to make the same investment? I conducted a mixed methods inquiry, combining qualitative and quantitative data that was collected simultaneously. The study was designed as a convergent parallel mixed methods study (Creswell & Plano Clark, 2018), giving priority to the qualitative data (QUAL + quan; see Figure 1). This means that I began by exploring the qualitative data to determine if there were discernable types

of advice (themes; Step 1) or perceived value of borrowing (valence; Step 2) in the participants' responses. Then I integrated the qualitative results with the quantitative data (Step 3) to investigate if there was an association between the two sets of data to examine whether or not the results were congruent. The qualitative analyses described advice based on borrowers' repayment experience, while the quantitative analyses considered whether or not the advice varied by the participants' demographic characteristics. The new variables (e.g., themes, valence) were examined for evidence of a fulfilled or changing social contract. Four research questions were considered:

RQ1. What types of advice about student loans would borrowers give to incoming college students based on their repayment experience?

RQ2. Is there a perceived value (valence) in the advice given by borrowers?

RQ3. Is the type of advice given associated with the perceived value (valence) of advice?

RQ4: Is there an association between the characteristics of the borrower and the perceived value (valence) of advice given?

To answer RQ1 and RQ2, I conducted open coding content analyses using QSR International's NVivo 11 Software to identify themes in responses to an open-ended question about student loan advice (e.g., themes) and the perceived value about the use of student loans (e.g., valence). Then, I extracted the coded qualitative data from NVivo by counting the frequency of each theme and tone of advice (e.g., valence). I assigned numeric values based on the type of loan advice (e.g., themes) given and the perceived value of the participants' responses (e.g., valence) to conduct quantitative analyses. To answer RQ3 and RQ4, I used the frequency of themes and the demographic

characteristics to conduct an ordinal logistic regression (OLR) to simultaneously examine the association with the valence of the responses.

Method

Sample

The current study used a subsample of participants from the Arizona Pathways to Life Success (APLUS) project, a four-wave longitudinal, self-report survey of a sample of young adults (Shim et al., 2010). The first wave of data was collected during their first year at college (ages 18-23), the second during their fourth year (ages 20-25) at college, the third two years after college (ages 22 to 27), and the fourth wave eight years after their freshmen year (ages 27-32). In the full sample of participants who completed the Wave 4 survey (N=855, 41% of the Wave 1 sample), 699 (82%) answered the single open-ended question regarding advice about student loans. Because my interest was in understanding the lived experience of borrowing and repaying student loans, the present sample included only the 282 participants (33%) who both took out a student loan and who answered the open-ended question. I compared the demographic characteristics of the study sample with those who took out loans but did not answer the question (n=91) and found no significant differences in the distribution (see Table 1). However, borrowers who completed the Wave 4 survey but did not answer the open-ended question tended to report higher incomes ($t(371) = 1.890$, $p = .060$).

In the analytic sample (N=282), the average undergraduate student loan amount was $27,853. Participants were primarily female (n=177, 62.8%) and White (n=166, 58.9%). Just over one-fifth (n=62, 22.0%) were Hispanic/Latino; 7.8% (n=24) were Asian, Asian American, or Pacific Islander; 6.0% (n=17) were African American; 2.8%

(*n*=8) were Other; and 2.5% (*n*=7) were Native American. Almost one-fourth (*n*=64, 22.7%) were first-generation college students. Participants' family income levels included: less than $50,000 (*n*=68, 24.3%); $50,000-$99,999 (*n*=105, 37.1%); $100,000-$200,000 (*n*=87, 31.1%); and more than $200,000 (*n*=21, 7.5%).

Data Analytic Plan

Study analyses were conducted in two steps: qualitative data analyses and quantitative data analyses. The subsequent sections begin with a description of the qualitative data analyses plan, outlining the qualitative approach and coding process, followed by qualitative results (Step 1). Then the quantitative approach, analyses, and results are presented (Step 2).

Step 1. Qualitative Data Analysis and Results

Qualitative Data Analyses Plan

To answer RQ1 and RQ2, I conducted a qualitative analysis while applying the assumptions of trustworthiness (Lincoln & Guba, 1985) and practicing self-as-researcher reflexivity (Denzin & Lincoln, 2011). During the entire coding process, the coding team independently coded each response, followed by multiple discussions to build consensus with ongoing comparison between coders to ensure intercoder reliability (Smith et al., 1994). For the qualitative data analyses, although we coded all responses to the question (*N*=699), we included only the responses of those who indicated they had taken out a student loan (*N*=282).

Trustworthiness

I used four criteria to establish trustworthiness: credibility, transferability, dependability, and confirmability. The trustworthiness criteria are described as "analogs

to ‘scientific’ understandings of conventional notions of internal validity (*credibility*), external validity (*transferability*), reliability (*dependability*), and objectivity (*confirmability*)” (Schwandt et al., 2007, p. 12). I established credibility by conducting extensive peer debriefing sessions with the coding team to discuss the interpretation of the data, question the interpretations, and data analyses. Peer debriefing was integral to collapsing the emergent categories into meaningful themes and developing the coding protocol. I established transferability by providing quotes directly from the participants about their student loan advice to offer thick descriptions of each theme. By providing direct quotes from the participants, others will be able to make judgments about the interpretation, similarity and degree of fit of the findings. To establish both dependability and confirmability, I maintained a clear audit trail that includes a record of consistency in the analyses and presentation of the findings in order to demonstrate replicability of the study. Dependability was also established by writing the dissertation and subsequent manuscript that demonstrates the applicability of the findings for higher education and policy implications. I further established confirmability by incorporating reflexivity throughout the data analyses process and maintaining an audit trail to demonstrate a rationale for the decisions made that includes researcher memos, meeting notes, and data files.

Self-as-Researcher

During the qualitative coding process, the coding team used memoing to ensure that their own biases and experiences did not influence the process or the interpretations of the data (Creswell, 2013). For example, I utilized student loans to fund my education. Thus, it was necessary for me to document my reactions to the data during the coding

process and conduct appropriate peer checks with the research team during the coding process to ensure that my experience did not bias the results (see Figure 2 for an example of a journal style memo and Figure 3 for an example of an exported memo created in NVIVO).

Qualitative Open Coding Data Analysis

Participants were asked to respond to the following open-ended question: "What advice would you give to high school seniors who are seeking student loans to pay for college?" The objective of this process was to identify conceptual categories and links, or common themes that emerged from the data (Strauss & Corbin, 1990). In the first exploratory step in this process, I examined the text for words or short phrases that captured the type of student loan advice the participants were giving. For example, many participants included advice encouraging students to think about how they would repay the loans before borrowing. After I completed reviewing all the responses, I imported the data into NVivo. Together with a second researcher, we independently coded a subset of the data (n=30) to describe the phenomenon using an iterative process: (a) discuss and compare findings to begin a list of tentative codes; (b) compare the current response to the previous responses to reveal new themes; (c) modify or add additional themes when a tentative finding was dis-confirmed or when additional themes or subthemes emerged.

Then, we coded a second subset of the data (n=70), combining the list of preliminary codes into five meaningful themes and subthemes to develop a coding protocol. During this process, we questioned our interpretations and remained open to changing or adding themes. For example, although we initially coded "high school grades" as a separate theme, our discussions suggested that the comments really were

about keeping high school grades high and belonged in the *Plan Ahead* Theme. When no new themes emerged, we grouped the initial categories into overarching themes with similar meanings to make it easier to compare (Elo & Kyngas, 2007). Each response was independently coded by the two researchers according to the coding protocol we developed. Because many of the responses included multiple types of advice or were very long, the coding protocol allowed for each response to be coded into multiple themes. For example, if the participant gave advice about living on a budget *and* going to community college first, that response would be coded to both the *Plan Ahead* theme and *Look for Alternatives to University* theme. We compared coding between the two researchers by using the coding query in NVivo, comparing the color-coded coding strips and interrater reliability functions, achieving a 97.06-100% intercoder agreement (Creswell & Plano Clark, 2018).

Qualitative Valence Coding Data Analysis

During the open coding process, I found some evidence that borrowers might be rethinking their choice to use student loans to fund their education. Specifically, in addition to types of advice, the responses from some borrowers suggested an affective assessment of their borrowing experience, which I defined as *valence* (Feather, 1995). Therefore, I went back to the original responses and recoded each response again. Because valence is typically characterized as either negative or positive (Colombetti, 2005; Merrill et al., 2020; Solomon & Stone, 2002), responses that implied that borrowing had value (e.g., worth it) were coded as a positive valence whereas those that implied that borrowing lacked value (e.g., don't, avoid) were coded as a negative valence. All other responses were coded as neutral (neither negative nor positive). Each response

was coded for a single valence category based on the overall tone of the entire text response to focus on the main opinion expressed by the participant (Feldman, 2013).

Of note, during the coding process we exercised caution when assigning valence and only coded the response as positive or negative if there was clear evidence of affect. For example, if a response advised taking out loans even if it meant having later debt, it was coded as positive because it endorsed the use of student loans. However, if a response advised other options, such as scholarships, and did not specifically endorse student loans, then it would be coded as neutral. If a response clearly advised not taking out loans, it was coded as negative. After we independently coded each of the participant's responses, we compared valence coding to reconcile differences. For responses that differed between the two initial researchers, I asked two additional researchers to independently code each of the valences (*n*=243, 34.8%) using the valence coding protocol we had developed during the coding and reconciling phase (see Table 3). The research team then met together to discuss the responses that were still in disagreement (*n*=83, 11.9%). We achieved consensus by discussing each response individually in a peer debriefing meeting in which all team members participated, focusing on the overall tone related to the topic of student loans. Because valence was a way to examine the experience of young adults living with student loans, the valence coding links the qualitative data to the quantitative data.

Qualitative Data Analyses Results

Qualitative Emergent Themes

Five overarching themes emerged from the qualitative open coding content analysis: (a) Plan ahead; (b) Make decisions based on future outcomes; (c) Look for

alternatives to University; (d) Repaying loans; and (e) Social comparison and character statements. Each theme was further divided into subthemes representing the type of student loan advice borrowers gave to incoming college students. Results of the open coding data analyses for the analytical sample are presented in Table 2.

Theme 1: Plan ahead. The most prevalent theme (*n*=207, 73%) reflected a strong message of being proactive before taking out student loans and proceeding with caution. There were four subthemes emphasizing a proactive approach: *Look for payment options* (*n* = 31, 11%); *Do loan research* (*n* = 71, 25%); *Seek advice and support* (*n* = 17, 6%); and *Apply for scholarships* (*n* = 72, 26%). From a proactive approach, young adults expressed the need to be informed about options and alternatives prior to taking out loans. For example, one participant advised students to "Inform yourself about the interest, repayment options, and the process before taking out a student loan. It also helps if you have someone in your corner that can guide you financially." Other participants shared, "I would advise them to try to get as many scholarships as possible. Sometimes, it helps to just apply for any help, no matter how small the contribution." This strong focus on scholarships was emphasized by two other borrowers when they capitalized specific words in their responses: "Make sure you only take what you need and work REALLY hard to find grants and scholarships instead."

Three additional subthemes emphasized the importance of being cautious about borrowing for college: *Limit the amount borrowed and calculate the real costs of borrowing* (*n* = 87, 31%); *Live frugally* (*n* = 24, 8.5%); *You are responsible for paying back the loan* (*n* = 50, 18%). As young adults with experience repaying their debt, borrowers made the connection between borrowing in the present and the future impact

of repayment. For example, one borrower noted, “Remember that you have to pay it back later. Don't take more than you can handle, create a budget for the start for expenses, savings, and paying off loan.” Another borrower stated, “Be careful with how much you take out. You may only borrow a thousand here and there each semester but over time and with interest it adds up.” In concert with the proactive approach, one borrower urged student to “Use loans as a resort after applying for scholarships/grants. Be aware that you will have to pay back EVERY DOLLAR you borrow, plus more with interest.”

In summary, borrowers who gave advice about planning ahead recommended that current borrowers think about how they were going to pay for college after they graduated because the details about student loans (e.g., interest rates) can impact their future. This potentially reflects that the higher education social contract was still working for these borrowers.

Theme 2: Make Decisions Based on Future Outcomes. The second theme (*n* = 113, 40%) emphasized the connection between choosing to use student loans and their future goals, including directly connecting using student loans to future careers. The following three subthemes were identified: *Choose college major based on future career* (*n* = 49, 17%), *future income* (*n* = 27, 10%), or *future dreams or interests* (*n* = 10, 3.5%); *Don’t be pressured into college and think about why you are going to college* (*n* = 32, 11%); and *Loans can delay future goals* (*n* = 33, 11.7%). For example, one borrower connected future careers and the ability to pay back loans by writing, “Think about how your career goals impact your ability to pay back loans and make decision based on multiple factors.” Another borrower shared, “Take the least amount you can. Most jobs do not pay you a salary where you can afford living in a nice and safe community and

still pay loans." Participants suggested thinking about why you want to go to college, stating,

> Make sure you are pursuing a job and not just a degree. Study something you are good at, not just something that interests you. Don't listen to advice from your parents or other adults. The educational landscape and job market is changing too rapidly and their information is outdated.

In summary, the advice in this theme was future oriented. Some borrowers warned that getting an education should be directly connected to potential earnings of their future career. Also, some stressed that just getting a college degree may not be enough and that financial security depended on choosing the right major. Far fewer borrowers expressed choosing a major based on interests. In addition to being a future burden, borrowers expressed that loan debt could delay future goals and might not meet their expectations.

Theme 3: Look for Alternatives to University. In the third theme (n = 62, 22%) borrowers suggested choosing affordable higher education options. The following three subthemes were identified: *Go to community college first* (n = 39, 13.8%) or *a cheaper school* (n =21, 7.4%); *Transfer to University later* (n =13, 5%); and *Go into the military or get a job instead of going to school* (n = 4, 1.4%). For example, one participant stated, "Go to community college for first 2 years. If you can't afford to pay for 4 years, pay for 2. University costs are a joke and students are forced into debt for no reason." Another said, "Do not go to college unless you are certain you will get a degree in a field which is currently hiring as well as paying well. If you do go to college, use your community colleges first." The emphasis on community college was mostly connected to lowering

the cost of college and therefore reducing the amount of student loan debt. One borrower stated, “Go to a good community college and work throughout school. Choose your major before starting school so you don't waste any time or money, even if that means not starting college right out of high school.”

In summary, rather than giving advice about limiting the amount of student loan debt, borrowers recommended choosing to go to a less expensive institution, like a community college instead of or prior to transferring to a four-year university. This suggests that those who used student loans advised going to a community college as a way to save money on higher education. Few participants suggested getting a job instead of going to college, reflecting that higher education was still something that should be pursued and that the higher education social contract was working.

Theme 4: Repaying Loans. For the fourth theme (*n* = 98, 35%) borrowers gave advice about how to manage and repay the loans, such as working while in college in order to make payments while you are still a student. The following four subthemes were identified: *Start paying while in college* (*n* = 24, 9%); *Pay more than the minimum* (*n* = 86, 31%); *Work to make payments while in college and sacrifice now* (*n* = 43, 15%); and *Pay regularly and as early as possible* (*n* = 14, 5%). For example, “If you can, pay the interest while in college for subsidized loans, and do not get forbearance when paying back your loan unless it is a last resort!” Similarly, many recommended paying more than the minimum due each month, such as one participant who said, “If you seek out loans, do so responsibly. Once you graduate pay as much as you can every month (not just the minimum payment).” The common message was to pay regularly and as early as

possible. For example, “Pay it off early and as quickly as possible. Right after college, it's easier to maintain a lower cost standard of living and remove debt.”

In summary, the young adult student loan borrowers seem to strongly recommend having a repayment plan and even begin paying off the debt before the degree is earned. Because the advice focused on what to do after you already had taken out the loans, this could reflect a new normal that assumes most will use loans to go to college. The advice may reflect the real impact that loans continue to have on their lives after they earn their degree, but that there were practical ways to handle paying off the loans after graduating.

Theme 5: Social Comparison and Character Statements. In the last advice theme, borrowers (*n* =37, 13%) included statements about the individuals’ character or comparisons to others. The following three subthemes were identified: *Work harder and don’t use loans to support a certain lifestyle* (*n* = 29, 10.3*%); Loan debt leads to negative peer comparisons* (*n* = 13; 4.6%); and *Loans can lead to more independence* (0.7%, *n* = 2). For example, “Only borrow what you need to pay for tuition/books. Do not borrow money to live a certain lifestyle.” In relation to taking out loans, one borrower stated, “Hard work now pays off big time in the future! Don't treat your future self so poorly, it will show your immaturity.” Another borrower warned that, “Graduating with so much student loan debt is stressful and also slows you down by many years at achieving certain life goals.” After recommending choosing more affordable schools and working during college, they said, “The hard work would be well worth it, and you would graduate ahead of your peers without debt.” On the other hand, a small group of borrowers suggested that having student loans can lead to a student feeling more independent. For example, one

borrower shared, “I think paying for a large portion of my college education taught me appreciation and greater discipline.”

In summary, included statements encompassed how loans may contribute to mixed feelings when borrowers compared their experience to those of their peers who did not have student loan debt. Some borrowers felt more responsible because of navigating the student loan process, while others felt that loans had overburdened their future. These borrowers may be questioning their experience when they compared themselves to their debt-free peers, but perhaps not to their peers without a college degree.

Valence Coding Results

In total, there were 70 responses coded as negative (25%) and 61 responses (22%) were coded as positive. The remaining 151 responses (53%) were coded as neutral valence (neither positive nor negative). Results of the valence coding data analyses are presented in Table 4.

Negative Valence. Negative valence responses included statements with strong recommendations to avoid student loans and/or emphasized only the negative implications of student loans. For example, “There's nothing worse than putting your dreams on hold after you graduate because you are so burdened with student loan debt.” Another borrower shared, “Accumulating student loan debt without guarantee that you'll get your "dream job" when you graduate college is a nightmare!” Many students expressed the challenge of getting a job with an income high enough to repay the loans. For example, one borrower advised,

> Don't go to college unless you know what you're going to do with your degree. College is too expensive and it is not worth taking out loans you're going to be

> paying off the rest of your life when all you can get is a minimum wage job even with your bachelors degree. Take as many classes at a community college as possible to save."

Another student shared that,

> As hard as it is right now to even find a job, a lot of people past college spend a huge chunk of their low-income jobs just on their loans. It's not worth it…If the only way you can pay for school is a loan, just don't do it. It's sad to say, but chances are, you'll get the same kind of job that you'd get with a big, expensive degree anyway.

While some borrowers reflected on having a positive experience in college, because of the negative impact of having student loan debt, they did not recommend using student loans. For example, on borrower stated,

> DONT DO IT! Even though my college experience was so incredible, with the debt I am in I would recommend going to a junior college first or only going to a school you can find a scholarship for. This debt hinders me from being independent, from my opportunity to save for my future, and makes it difficult for me to pay other bills on time as well. Not to mention I'm extremely stressed. My friends that didn't take out loans are currently buying a house, getting a married, and have had the opportunity to travel. I'm nowhere close to that opportunity.

In summary, these borrowers generally felt that the student loan debt was ultimately "not worth it". One borrower said, "A degree is barely worth the average amount of debt these days." Additionally, several participants simply wrote, "Don't." The

negative responses suggests that some borrowers may be questioning the wisdom of borrowing for education.

Positive Valence. Almost 22% (*n* = 61) of the young adult borrowers' advice was coded as positive. Included statements gave strong endorsements of the benefits of taking out student loans as an investment in their future and hope that loans could be repaid. One borrower shared, "Recognize that a student loan can be an investment. Do your research on loan repayment, have a plan, and receive the education that will make you confident in the world as a person." Another borrower shared, "Keep it low, college helped me get a better job and if I hadn't gotten a master's degree I'd be more than halfway done paying it back just 3 years later." While acknowledging the potential financial stress of repaying the loans, one borrower expressed,

> If that is the path you must take in order to go to college then I think it is absolutely worth it. There are certainly stressors that come with it after college but I would never take back those years I had in undergraduate school.

Positive responses also included advice that assumed that student loans were necessary and provided best practices to take out student loans wisely. For example, "If you don't need them, don't get them, but if you need them, it's ok to take them out, but be smart about how much you take out." Another borrower stated,

> Know what they are ahead of time, ask questions, understand how they work. I would especially like to emphasize that student loans are not scary, nebulous things. The more information you have, the better decisions you will be able to make. You are making an investment in yourself and you will need to pay it off later.

These borrowers did not minimize the burden of debt, but rather focused on how to manage the debt and emphasized the benefits that came with the education. One borrower encouraged, "You CAN do it. It IS possible. You DON'T have to accept that you will have loans forever. PAY IT OFF!" The positive responses suggests that the payoff of the social contract is working for some borrowers.

Neutral Valence. More than half (54%; *n* = 151) of the young adult borrowers' advice was coded as neutral. Included statements neither strongly endorsed nor opposed using student loans. The responses advised how best to take out student loans if they were needed and offered advice about other options to investigate prior to taking out loans. For example,

> I would take the loan as long as you are prepared to owe money when you get out of college. It also helps to look at what your major is going to be and if a career that will stem from that major will help you to pay off your student loans.

Another borrower shared, "Look for other options first, like jobs or scholarships before seeking student loans but if you still need to make sure to research the loans you apply for." Several borrowers gave specific detailed precautions about loans, such as,

> Read everything and ask questions! Don't worry about feeling stupid-loans are very complicated. In particular, make sure you understand how much interest you will end up paying over the life of the loan if you make only the minimum monthly payment. You will be paying back much more than you borrowed! Be sure that you are realistic with where you will be in 4 years after you earn your degree. For instance, taking out $150,000 in student loans to become an

elementary school teacher making $40,000/year probably isn't a good financial move.

In summary, the majority of the responses were coded neutral, reflecting much of the financial advice regarding student loans given by financial experts, such as taking the minimum amount out and paying back the loan quickly. Although both the positive and neutral advice acknowledged the value in taking out loans despite the potential stress of repaying loans and a delay in the education payoff, the negative responses suggests that some borrowers are questioning if the social contract is broken. Thus, I conducted quantitative analyses to determine for whom the higher education social contract may not hold.

Step 2. Quantitative Data Analysis and Results

Quantitative Data Analytic Plan

To answer RQ3 and RQ4, I conducted an ordinal logistic regression (OLR) to test if there were discernible associations between the type (e.g., themes), the tone (e.g., valence) of advice given, and demographic characteristics. I created six new quantitative variables from the qualitative results (five themes and one valence) to use in the quantitative analyses. I used OLR analyses because the dependent variable (i.e., valence) was an ordered categorical variable that had three levels ranked in a meaningful way (e.g., negative, neutral, and positive; Brant, 1990). Compared to a multinomial logistic regression, an OLR preserves the ranking of the dependent variable and provides information as to how each independent variable contributed to it. The results of the OLR determined if and which of the independent variables (e.g., five emergent themes, demographic characteristics) had a statistically significant effect on the dependent

variable and the odds that one group (e.g., those who gave advice about planning ahead) were more likely to give advice with a positive tone compared to those who gave neutral or negative toned advice.

Measures

Types of Advice (i.e., emergent themes). For each of the emergent themes identified during the open coding data analyses step, I created five separate dichotomous categorical variables to represent the presence or absence of each theme in the response (0=No Presence, 1=Presence; see Figure 4). If the participant mentioned a theme in their response, it was coded as "1" otherwise it was coded as "0". Because the themes were not mutually exclusive, each response could contain multiple themes (i.e., each response was associated with five dichotomous variables).

Valence (i.e., tone of advice). As previously described, each response was coded for affective assessment of the borrowing experience as a second and separate coding process. Responses that implied that borrowing had value (e.g., worth it) were coded as a positive valence whereas those that implied that borrowing lacked value (e.g., don't, avoid) were coded as a negative valence. All other responses were coded as neutral (neither negative nor positive). Although a response could be coded for multiple themes, each response was coded only once for the overall tone of the advice. I created one ordinal variable to represent a mutually exclusive ranked order (0=Negative, 1=Neutral, 2=Positive) (Greenstein & Davis, 2013).

Demographic Characteristics. To consider if sociodemographic characteristics might influence the student loan experience (Cherney et al., 2019; Furquim et al., 2017), the OLR analyses estimated the odds that specific demographic characteristics were

associated with each valence group. The demographic characteristics were coded as follows: sex (male=1; female=2); race/ethnicity (African American=1; Asian=2; Pacific Islander=3; Hispanic/Latino=4; Native American=5; White=6; and other=7); first-generation college student (yes=1; no=0); family income level (less than $50,000=1; $50,000-$99,999=2; $100,000-$200,000=3; and more than $200,000=4); current income (1=up to $24,999; 2=$25,000–$39,999; 3=$40,000–$59,999; 4=$60,000–$74,999; 5=$75,000 up); and work status (1= Full-time; 2= Part-time; 3= Part-time, looking for full; 4= Self-employed; 5= Unemployed, looking; and 6= Unemployed, not looking).

Quantitative Data Analyses Results

Preliminary Data Analyses

Prior to investigating potential associations between the predictor variables (i.e., advice themes and borrower characteristics) and valence, I conducted preliminary analyses to ensure that the data met the four assumptions of the OLR technique (Lee, 2019): (1) The dependent variable was measured as an ordinal variable; (2) The independent variables were either continuous, ordinal, or categorical; (3) The data did not have high multicollinearity; and (4) The data yielded proportional odds. The dependent variable was measured as an ordinal variable and the independent variables were either continuous, ordinal, or categorical, thus satisfying the first two assumptions. Testing for assumption three and four was conducted in SPSS. To test for the third assumption, Pearson bivariate correlations were conducted to examine the associations among the predictor variables in the model (see Table 5, cols. 4-15). The correlations were low to moderate, indicating that there was not a problem with multicollinearity and that each variable was measuring a unique construct. The fourth assumption of OLR is the

proportional odds assumption that the effects of any independent variables are consistent and have the same relationship with the dependent variable. In other words, the relationship between each pair of groups is equal and will produce only one set of coefficients. This assumption was evaluated in the SPSS output of the OLR in the parallel lines test. The results of the Test of Parallel Lines were not significant ($p > 0.05$), indicating that the null hypothesis could not be rejected and thus the model met the assumption of proportional odds; specifically, the effects of all independent variables were consistent and had the same relationship with the dependent variable.

OLR Results

I computed an OLR analysis to investigate if there were discernible associations between demographic characteristics, the type (e.g., themes), and the tone (e.g., valence) of advice given. The Chi-square model fitness test was significant (χ^2=549.651 – 489.984 = 59.667, $p < 0.000$), indicating that including the predictor variables in the model improved the likelihood of the outcome. The result of the Pearson goodness-of-fit test was not significant (χ^2=531.630, $p = 0.111$), indicating that the model fit was good and the null hypothesis was not rejected. Nagelkerke's pseudo R^2 indicated that 22.1% of the variance in the Valence outcome was explained by the combination of selected predictor variables. The results of the OLR are shown in Table 6. Positive Valence was the highest value and was used as the reference category to maintain the ranked order of the categories. Because of the proportional odds assumption that the relationship between each pair of outcomes was the same, there was only one set of coefficients. Thus, the coefficient for the Neutral or Negative Valence groups defined the threshold of the log likelihood that a response would need to meet to be in the next highest category. In other

words, a significant negative coefficient is interpreted as lower likelihood of being in a higher category, holding all other variables constant whereas a significant positive coefficient is interpreted as greater likelihood of being in a higher category.

Four of the predictor variables were significant, including three of the emergent advice themes: Plan Ahead, Look for Alternatives to University, Repaying Loans; and one of the demographic predictor variables: First-generation status. While the initial analysis found that current income was significant ($p < .05$), following the Bonferroni adjustment due to the multiple testing issue (Jafari et al., 2019), current income was no longer significant ($p < .0125$).

Regarding the emergent advice themes, participants who provided advice in either the Plan Ahead theme or the Repay Loans theme, (i.e., going from 0 to 1), were less likely to be in a positive valence category, holding all other variables constant. The ordered logit for borrowers who provided advice in the Plan Ahead theme was -.85. The odds of the borrower who provided advice in the Plan Ahead theme being in the negative valence group was 0.43 times less likely than being in the combined positive and neutral valence groups, given that all other variables in the model are held constant. Because of the proportional odds assumption and having only one set of coefficients, the odds of the borrower who provided advice in the Plan Ahead theme being in the positive valence group was also 0.43 times less likely than being in the combined negative and neutral valence groups, given that all other variables in the model are held constant. This means that it was more likely for borrowers who provided advice in the Plan Ahead theme to be in the neutral valence category than either the positive or negative valence category.

The ordered logit for borrowers who provided advice in the Repay Loans theme being in a higher valence category was -.69. The odds of the borrowers who provided advice in the Repay Loans theme being in the negative valence group was 0.50 times less likely than being in the combined positive and neutral valence groups, and also 0.50 times less likely being in the positive valence group than being in the combined negative and neutral valence groups, given that all other variables in the model are held constant. This means that it was more likely for borrowers who provided advice in the Repay Loans theme to be in the neutral valence category than in the positive or negative valence category.

In contrast, borrowers who provided advice in the Alternative to University theme (i.e., going from 0 to 1), were more likely to be in a higher group, holding all other variables constant. The ordered logit for borrowers who provided advice in the Alternative to University theme being in a higher valence category was 1.36. The odds of the borrowers who provided advice in the Alternative to University theme being in the positive valence group was 3.89 times more likely than being in the combined negative and neutral valence groups, and also 3.89 times more likely being in the negative valence group than being in the positive and neutral valence groups combined, given that all other variables in the model are held constant. This means that it was more likely for borrowers who provided advice in the Alternative to University theme to be in the positive or negative valence category than in the neutral valence category.

Finally, first-generation students (i.e., going from 0 to 1) were more likely to be in a higher group, holding all other variables constant. The ordered logit for first-generation students being in a higher Valence category was .66. First-generation student borrowers

were 1.94 times more likely to be in the positive valence category than the negative and neutral groups combined, and also 1.94 times more likely to be in the negative valence group than the positive or neutral groups combined. This means that it was more likely that borrowers who were first-generation students to be in the positive or negative valence category than in the neutral valence category.

Post hoc Analyses

A logistic regression analysis was conducted to further investigate the pattern of the significant predictors in each of the three Valence categories separately. By examining each Valence category separately, I looked closer at differences within each of the extreme groups (e.g., Positive and Negative Valence) without the noise of the Neutral Valence group. Specifically, the tone of advice given by first-generation students, and those who gave advice in the Look for Alternatives to University themes, were more likely to be in the Negative Valence group whereas those who gave advice in the Plan Ahead and Repaying Loans themes, were less likely to be in the Negative Valence group (see Table 7). None of the predictors were significant in predicting the likelihood of giving advice in the Neutral Valence group (see Table 8). The log odds that a borrower gave advice in the Positive Valence group was positively related to the Repaying Loans theme and negatively related to the Look for Alternatives to University theme (see Table 9).

Because first-generation college students were not the original focus of this study, post hoc analyses were conducted to examine the demographic breakdown for first-generation students (*n*=64, 22.7%) to better understand this group of borrowers. First-generation college students were primarily female (*n*=39, 60.9%) and White (*n*=35,

54.7%). One-fifth (*n*=20, 31.3%) were Hispanic/Latino; 7.8% (*n*=5) were African American; 3.1% (*n*=2) were Native American; 1.6% (*n*=1) were Pacific Islander; and 1.6% (*n*=1) were Other. First-generation students' family income levels included: less than $50,000 (*n*=28, 45.2%); $50,000-$99,999 (*n*=24, 38.7%); $100,000-$200,000 (*n*=8, 12.9%); and more than $200,000 (*n*=2, 3.2%). The average undergraduate student loan amount was $25,327.59. I also compared the demographic characteristics of the study sample between those who were first generation students and those who were not (see Table 10). Borrowers who were first-generation students reported significantly lower family incomes ($t(278) = 4.914$, $p = .000$). Although only approaching significance, borrowers reported race/ethnicity differences ($t(6) = 11.258$, $p = .081$). There was a higher proportion of first-generation students who were Hispanic/Latino and none were Asian or Asian American compared to those who were not first-generation students.

Discussion

The current study investigated the higher education social contract that students as individuals incur the additional cost of loans, expecting to repay the debt with earnings from stable, well-paying careers, and increased future opportunities and if student loan borrowers would advise others to make the same investment. This mixed methods study began with a qualitative analysis of advice given by student loan borrowers to potential borrowers revealing five emergent themes (e.g., Plan ahead; Make decisions based on future outcomes; Look for alternatives to university; Repaying loans; and Social comparison and character statements). The themes revealed tips and strategies similar to that given by financial advisors, such as budgeting and only borrowing the minimum amount needed. The type of advice provides some insight into the potential source of

borrowers' concerns (e.g., lack of planning ahead and difficulty in repaying). In addition, the affective tone of the advice given (e.g., negative, positive, neutral), given by the majority of the borrowers indicated that higher education, even if you have to borrow, was still worth it. However, one quarter of the borrowers suggested that for some, borrowing for education may diminish the value of education and that future borrowers should be cautious when borrowing. Then quantitative analyses determined if the tone of the advice was associated with the type of advice given or the individual characteristics of the borrower. Key findings suggest the higher education social contract may be changing for first-generation college students (FGCS) who may be questioning the value of higher education when they are repaying the loans. Further discussion follows regarding borrowers' reflections on repaying student loans.

Meaning of the Social Contract for FGCS

Of all the demographic characteristics, only FGCS was significantly associated with the tone of advice given – overall, it was negative. This could reflect a sadder but wiser learning experience, in that FGCS were navigating the college experience and borrowing process alone. For example, because their parents did not graduate from college, they may not have been able to provide college financial guidance (e.g., applying for financial aid), or to fully grasp the longer-term implications of student loan debt. It is also possible that FGCS in this study may have over borrowed or took out more financial aid than needed in order to pay for non-academic expenses (e.g., living expenses, personal expenses). Much of the research on FGCS focuses on factors related to college enrollment and retention, such as higher academic preparedness (Saenz, 2007), and supportive family relationships (Capannola & Johnson, 2020; Nichols & Islas, 2016;

Wells et al., 2011). However, FGCS may need more intensive financial counseling both before college to make more informed borrowing choices as well as after graduation to manage their financial obligations in the absence of family financial support that supports financial security beyond just earning a degree.

While all income groups have increased their use of borrowing, students from lower-resourced families are more likely to borrow for their education because their family cannot pay (Baker et al., 2017; Cho et al., 2015; Fry, 2014; Houle, 2013). Previous studies have found that students from lower resourced families (Cataldi et al., 2018; Jenkins et al., 2013) and families of color carry substantially more school debt than their peers (Addo et al., 2016; Elliott & Friedline, 2013). Yet, I did not find evidence that family income or race/ethnicity made a difference in the tone or type of advice provided (Akee et al., 2019). However, the FGCS in this sample were more likely to be from lower income families and families of color, which may account for the lack of evidence of family income or race/ethnicity. Overall, because students from lower-resourced families are more likely to rely on student loans (Lee & Mueller, 2014) and to borrow more for their education (Furquim et al., 2017), a lack of financial preparedness (e.g., application support, knowledge of alternatives, over borrowing) may be unintentionally setting them up to struggle after college. That is, despite the intent to improve access to higher education, student loans for students from lower-resourced families may not be working as intended. In this sense, the mounting student loan debt may actually be reproducing inequality (Houle & Addo, 2019; Kim et al., 2016; Zajacova & Lawrence, 2018), suggesting the higher education social contract may have a higher cost for some.

Voice of the Borrower

Although the specific advice given by the borrowers in this study was similar to experts, the unexpected and unique finding was the emotion that accompanied the advice. Specifically, nearly half of the respondents gave advice with either a positive or negative affective tone. This finding distinguishes the borrowers' advice from that of the experts, reflecting their lived experience of the loan repayment process. It makes sense that the majority of the responses were neutral, perhaps reflecting the acceptance of responsibility as their part of fulfilling the contract. Exploring the extreme emotional responses of negative and positive valence (Colombetti, 2005; Solomon & Stone, 2002) offered insight into the student loan borrower experience and the higher education social contract. Although all borrowers in this study successfully graduated from college, not all of the advice was positive. It is likely that, for some the repayment experience was different than expected and that some may have underestimated the effort required to fulfill the contract. While the borrowers' advice was instructive and practical, some borrowers recommended that those following in their footsteps be wary and do things differently than they did. Future qualitative research should delve deeper into student loan borrowers' expectations and beliefs about future opportunities afforded them due to having a college degree.

Family Financial Socialization

Although there is robust empirical support for continuing family financial influence, especially from parents (Burcher et al., 2018; Clarke et al., 2005; Gudmunson & Danes, 2011; Jorgensen & Savla, 2010; Rudi et al., 2020; Serido et al., 2010; Tang et al., 2015), the advice from the borrowers in this study did not reflect this. In fact, a few

borrowers explicitly stated the opposite to "not listen to what parents recommend". Instead, the young adults in this study repeatedly reminded future borrowers that the individual was responsible to repay the loan. This finding is in line with the social contract theory, in that it is the individual student who takes out the loan and ultimately benefits from education. On the one hand, this makes sense because young adults are at the stage of life where they are expected to be living independent of their family of origin and financially responsible for repaying the loans. On the other hand, viewing the decision to borrow simply as an individual one may not reflect the contextual influences surrounding the initial decision to borrow (Friedline et al., 2020). Families are driving forces in education and career choices (Berrios-Allison, 2005; Stivers & Berman, 2020). Previous research suggests that students relied heavily on advice from trusted adults, such as their parents or guidance counselors (Christie & Munro, 2003; Johnson, O'Neill et al., 2016). However, the findings from this study reflect the real-life experience of repaying student loans in the context of other adult responsibilities, and suggest that potential borrowers may benefit from education and counseling from non-family members to understand the competing financial demands of adult life, to help them make more informed borrowing decisions.

Be Responsible and Financially Plan Ahead

Not surprisingly, the majority of the borrowers in this study gave financial advice about planning ahead before taking out student loan debt. The advice was practical and consistent with the financial advice given by experts (Cooley, 2013; Entrance Counseling, 2018). The focus on repayment makes sense because repaying loans is a task they have had to figure out. Because financial capability improves with experience

(Levere & Tivol, 2015; Serido et al., 2013), it appears that borrowers have learned what works and they are advising their younger selves from that perspective. The warning to plan ahead and be responsible also reflects the understanding that comes with an increase in financial responsibilities. It is interesting to note that the tone of advice was associated with three specific themes: advice urging potential borrowers to consider all their education options beforehand was more likely to have a negative overtone, whereas urging potential borrowers to plan ahead and make plans to repay the loans was less likely to have a negative tone.

Taken together, these findings emphasize the need for young adults to have more hands-on applications and opportunities to explore the impact of repayment prior to taking out loans. For example, many higher education institutions provide net price calculators (NPC) to potential students so that they and their parents could estimate the true cost of attending (Alexander et al., 2021; Fernandez et al., 2016; Shaffer et al., 2016). Accurately assessing one's future income is key to calculating the future repayment burden to the borrower (Dearden, 2019). However, even with required loan counseling, many students still report not understanding their loan terms, the repayment process, or how much they owe in loans (Andruska et al., 2014; Fernandez et al., 2015; Johnson, O'Neill, et al., 2016; Markle, 2019). If they are struggling with the terms of their loans, how can they begin to comprehend the lasting financial impact of student loans on their lives after graduating?

Future policy should consider providing more simulation student loan calculators in addition to the NPC. Considering that many students graduate with loan debt, this cost should be transparent to potential students as they make decisions about when and where

to attend college. Additionally, online student loan calculators should improve access to online material to support informal learning and improve financial competence (Fürstenau & Hommel, 2019). Financial aid professionals not only recommend requiring financial education for student loan borrowers, but also offering regular and varied options to deliver financial education (Webster et al., 2017). This suggests that a rethinking of financial aid counseling as an ongoing process rather than a single class or session may be in order.

Limitations and Future Research

As with all studies, several limitations need to be considered. First, this sample was drawn from a college cohort at a single university and may not generalize to all student loan borrowers. However, this sample was unique in that they graduated from college and have been responsible for repaying their loans for five years. Second, the qualitative data were limited to open-ended comments to a single question and does not allow for the depth of understanding that an interview offers. Additionally, the time period of the data collection should be considered. This sample of young adults borrowed prior to the Great Recession, but then entered a depressed job market with high unemployment after graduating (Bialik & Fry, 2019; Kalleberg, 2013; Shierholz et al., 2013). It would be helpful to examine if other cohorts offer the same advice or have similar student loan experiences. Considering the recent economic decline due to the Covid-19 pandemic, continued research is needed to understand the long-term impact of economic volatility on borrowers' experience.

Despite these limitations, the findings in this study provide new insights and potential implications for higher education, especially the advice connecting one's

college major to a future career. Future research should further examine whether borrowers currently have a job that is directly connected to their degree and if borrowers felt like their degree was beneficial in securing and keeping their job. Finally, understanding the benefits of a college degree after one repays their loans is an area that needs further investigation. It is possible that once a student loan is repaid, borrowers may feel differently about their experience.

Implications for Students as Consumers or Learners

The findings in this study provide evidence that the meaning of the higher education social contract may be changing for some borrowers. While few participants recommended not going to college, they strongly recommended only using loans if you choose a major that leads to a career that pays well. In addition, the language used by the borrowers positions education as a commodity, something the student buys, rather than an investment in learning. In other words, the value of education was not simply getting a degree, but getting the *right degree*, that leads to a career that can pay enough to pay the loans back. These findings provide insights on previous research as to why college students believe that getting a college degree is a financial investment (Chudry et al., 2011; Johnson, Gutter, et al., 2016; Johnson, O'Neill, et al., 2016). However, the college wage premium, in other words earning a higher salary because of having a college degree, has been decreasing over the past several decades (Ashworth & Ransom, 2019). In reality, student loan debt may be driving career decisions (Rothstein & Rouse, 2011; Velez et al., 2019), with borrowers opting for the higher-paying job instead of the career they envisioned (Luo & Mongey, 2017; Minicozzi, 2005). However, this is not necessarily contrary to the higher education social contract. Specifically, this suggests

that having a college degree still offers borrowers choices in what career they pursue. Future research should explore how student loan repayment may influence which majors and careers borrowers choose.

Viewing higher education as a consumer purchase runs counter to the advice and counseling offered to students on the importance of choosing meaningful careers (Adams, 2012; Dik et al., 2015). On the one hand college is a time to explore alternative majors and career options (Côté, 2006) and develop a strong career identity (Stringer & Kerpelman, 2010). On the other hand, the reality is that marketable skills are what employers are looking for. Two national reports of U.S. employers highlighted the need for graduates to develop soft skills such as critical thinking, problem-solving skills, teamwork abilities, written and oral communication, a strong work ethic, and the ability to apply knowledge in real-world settings (Hart Research Associates, 2013; NACE, 2017). While some young adults have expressed a desire for their work to matter and provide purpose (Allan et al., 2017), for students with limited financial means, college may be a means to an end rather than a time for discovery. However, the connection between student loans and meaningful careers deserves further inquiry.

It is interesting that many of the borrowers suggested less expensive alternatives to college, including community college. On the surface this makes sense, as community colleges are less expensive and promote access and equity to underrepresented students (Cuellar & Gandara, 2020; Hagedorn & Kuznetsova, 2016). However, focusing on cost alone may contribute to other problems, such as lower rates of completion (Juszkiewicz, 2020), college transfer shock (Ivins et al., 2017), and non-transferable credits (Belfield et al., 2017; Giani, 2019). In the end, community colleges may have a place in college

affordability, but the focus on community colleges may also suggest that there may be multiple higher education social contracts. In the continuing context of economic volatility and decreased employment quality (Kalleberg, 2020; Moen et al., 2020), the higher education social contract may indeed need revising.

Access to quality employment after graduation also may be impacting borrowers' ability to repay their loans. Although college counselors may want to support students in career exploration during their undergraduate studies, it is important to also consider the total cost of education, especially if the student is using loans to pay for it. College career and financial counselors should balance the focus on career exploration with the financial investment in college as a stepping stone towards a lifelong career that is also financially stable. Students should also reflect on other aspects of college beyond choosing a major that will lead to a well-paying job. Employers want students who are prepared for the workforce, which includes not only understanding industry specific knowledge, but also problem-solving and communication skills.

Conclusion

Considering that much of the advice for student loan borrowers comes from financial experts in the field, the findings from this study add the unique perspective of those who are living with and paying off the debt and the value of student loans in obtaining a college degree. The advice given emphasized being responsible for one's choices. This suggests a maturity that will be beneficial for their future. However, the findings also raise important questions for higher education administrators and economic policy makers. Although having student loans can support degree completion (Jackson et al., 2013), the financial stress associated with repaying student loans may be more than

what some borrowers expected. Findings from both the qualitative and quantitative analyses demonstrated that future expectations are not as clear as they once were and may be evidence that the higher education social contract is changing.

Chapter 3

STUDY 2: YOUNG ADULT STUDENT LOAN BORROWERS: MEANING IN LIFE, SELF-CONCEPT, AND SATISFACTION

Introduction

Not only is young adulthood a time of separating from one's family of origin, it is also a time of searching for purpose and meaning in one's life (Schwartz et al., 2005). Young adults are making important decisions that set a foundation for launching their adult lives (Arnett, 2004). For previous generations, adulthood meant achieving observable markers of adult status (e.g., career, marriage, living apart from family) in an unfolding sequence. Over the past 30 years, the timing in achieving these milestones unfolds differently compared to past generations (Benson & Furstenberg, 2007; Bialik & Fry, 2019; Houle, 2014). Consequently, subjective assessments of adult status may be more reflective of successful transitions to adulthood (Nikitin & Freund, 2008). Mayseles and Keren (2014) have proposed that finding meaning in life is a necessary developmental task for young adults. Meaning and purpose are central to life, allowing individuals to make sense of the many interactions that occur in everyday events and relationships (Baumeister, 1991; Park, 2010). The primary goal of this study was to examine the connection between meaning in life, as a subjective marker of a successful adult transition, and satisfaction among young adult student loan borrowers five years after graduation.

Although many studies provide evidence of a positive association between meaning in life and both life satisfaction and well-being (Krok, 2018; Lane & Mathes, 2018), few studies have examined the mechanisms that might explain this association

(Hooker et al., 2018; Miao & Gan, 2019). Because meaning in life reflects individual interpretations of life experiences in a way that brings order and purpose, some researchers have suggested that meaning in life initiates an internal self-reflection process, and that individual self-concept may explain why meaning in life is associated with life satisfaction and well-being (Hooker et al., 2018). Self-concept refers to internal cognitive processes that enable an individual to interpret and respond to external influences and experiences based upon what they believe they are capable of doing (Bandura, 1991). The second aim of this study is to examine self-concept as a potential explanatory mechanism in the association between meaning in life and satisfaction. Identifying a mechanism that explains the association may provide insights that may be helpful in designing interventions to promote better individual health and well-being among young adults.

Young adults with a college education report greater meaning in life and higher life satisfaction compared to those without a college degree (Park et al., 2010) and generally report that the college experience had an overall positive impact on their career (Parker et al., 2016). Investing in one's education increases access to better jobs and financial security (Carnevale et al., 2013; Ma et al., 2016), and with that comes greater satisfaction in other life domains such as career (Vuolo et al., 2016) and finances (Henager & Wilmarth, 2018). Despite the positive association between a college education and higher meaning in life and satisfaction, to this researcher's knowledge, no studies have examined these associations among young adult college graduates who borrowed to pay for college. Life circumstances may bolster or undermine self-concept (Dwyer et al., 2011; Sweet, 2018). Paying off student loans is stressful (Lusardi et al.,

2016; Walsemann et al., 2015) and worrying about repaying loans is associated with poorer health for those repaying student loans (McLean-Meyinsse, 2019). Because so many young adults have student loan debt (Addo, 2014; Bozick & Estacion, 2014; Doran et al., 2016), understanding if repayment status (i.e., paid off vs. repaying) affects the association between meaning in life and young adult satisfaction may provide useful insights about how to support student loan borrowers during the repayment process. The present study examined the potential mediating effects of self-concept in the association between meaning in life and satisfaction (i.e., life, job, financial) under two conditions: student loan borrowers who have graduated and paid off their loans and those who are still in the repayment process.

Theoretical Framework

Whether envisioned as a philosophical concept or a psychological construct, meaning in life (MIL) is an important component of individual well-being (Steger, 2009). MIL is generally defined as one's subjective assessment of overall beliefs, goals, and sense of purpose (Park, 2010). MIL is shaped by early interactions within the family, as individuals attempt to make sense of what they observe and what is happening around them. These interactions include both microevents (e.g., sibling arguments, family rituals), and major life events (e.g., birth of a sibling, graduation). Much of the literature examining MIL centers on the association between MIL and coping during stressful life events (Park, 2010; Park & Baumeister, 2017), including illness (Pakenham, 2007) and loss of a loved one (Michael & Snyder, 2005). MIL is also consistently positively associated with positive affect (e.g., good mood, King et al., 2016; Miao & Gan, 2019, 2020) and coping strategies (Miao & Gan, 2019), and negatively associated with severe

grief (Keese et al., 2008), depression (Park et al., 2020), and anxiety during times of high stress (Halama & Bakosova, 2009; Miller & Rottinghaus, 2014).

Because MIL serves as a basis for how individuals interpret and respond to new experiences, MIL is sometimes conceptualized as a motivator for self-regulation in pursuit of life goals, which in turn is associated with satisfaction (Hooker et. al., 2018). Self-regulation is broadly defined as a self-evaluation process that life has purpose and makes sense. This study relies on the conceptual model of Hooker et al. (2018) to examine self-regulation as the linking mechanism to explain why higher MIL is associated with higher satisfaction. An underlying assumption in this model is that MIL activates individual self-regulation via two possible paths: (a) affective; and (b) capability and mastery. The affective pathway posits that MIL contributes to a sense of purpose and self-worth whereas, the capability and mastery pathway contributes to the sense that individuals have some control in meeting their life goals and offers a reason or purpose to persevere in pursuing goals even under challenging conditions. What Hooker et al. (2018) describes as self-regulation, others have described as the broader notion of self-concept (Dirlam & Merry, 2021; Light, 2017; Marsh & Craven, 2006). Self-concept represents a person's self-perceptions that are both reflective (i.e., affective) and evaluative (i.e., capability and mastery) and is formed through experience (Shavelson et al., 1976). Because self-regulation is often associated with early childhood development (Kochanska et al., 2001; McClelland et al., 2018; Montroy et al., 2016) and multiple definitions are used across disciplines (Booth et al., 2018), for the purposes of this study I used the term self-concept to represent the intermediary processes linking MIL and satisfaction during young adulthood.

As applied to the present study, I conceptualized the broader notion of self-concept as two related yet distinct aspects: self-esteem and self-efficacy (Chen et al., 2004; Deuling & Burns, 2017; Dirlam & Merry, 2021; Dwyer et al., 2011). Self-esteem, defined as a sense of purpose and self-worth (Bandura, 1991) represents the affective self-concept pathway. Self-efficacy, defined as task-specific beliefs that are malleable and can depend on an individuals' specific context (Bandura, 1991; Grether et al., 2018), represents the mastery self-concept pathway. A unique component of the present study is to focus on the role of finances on both MIL and satisfaction among student loan borrowers. For this reason, I examine capability and mastery within the financial domain. Whereas self-esteem represents one's overall sense of liking one's self, financial self-efficacy represents perceived ability to perform a task in the financial domain (Bandura, 2006; Schunk & Zimmerman, 2007). The conceptual model guiding this study is depicted in Figure 5.

Literature Review

Meaning in Life and Young Adult Satisfaction

An overall sense of well-being encompasses an assessment of satisfaction across multiple life domains (Diener, 1984; Pavot & Diener, 2009). Although domain-specific satisfaction contributes to overall life satisfaction, levels of satisfaction in specific life domains and the salience of specific life domains varies during the life course (Easterlin, 2003). For instance, health may be more salient for older adults whereas academic satisfaction may be more salient for youth. Considering the saliency of employment and financial independence for young adults in the United States (Arnett, 2004; Xiao et al.,

2014), in this study I examined both job and financial satisfaction in addition to overall life satisfaction.

Life Satisfaction

Higher life satisfaction in young adulthood is positively associated with better mental health (e.g., lower levels of depression; Schütz et al., 2013), physical activity (An et al., 2020), work engagement (Upadya, 2017), and peer and family relationships (Guarnieri et al., 2015; Hollifield & Conger, 2015). Despite the many pathways, a successful transition to adulthood includes feeling satisfied with the direction in which life is headed and feeling capable of changing paths to something better if desired (Scales et al., 2016). Although there is support for a positive association between MIL and life satisfaction among young adults (Bronk et al., 2009), the majority of these studies rely on college student samples (Halama & Bakosova, 2009) or age-level comparisons among adult samples (e.g., older adults compared to younger adults; Morgan & Robinson, 2013). This study will add to this literature by examining the relations between MIL and life satisfaction among young adults. Based on the literature reviewed, MIL was expected to be positively associated with young adults' life satisfaction.

Job Satisfaction

Job satisfaction represents how one feels about their job (Aziri, 2011), often reflecting what one expects or values from a job (Brown, 2016). Among adult workers, there are positive associations between job satisfaction and well-being (Extremera et al., 2020; Karabati et al., 2019), as well as positive associations between MIL and job satisfaction (Lee et al., 2017; Robert et al., 2006). But less is known about the association between MIL and job satisfaction for young adults during their early career. For young

adults transitioning between college and work, maintaining a positive attitude about their current job was essential in maintaining a positive outlook for their future job possibilities (Murphy et al., 2010). Establishing one's career in young adulthood is an indicator of a successful transition to adulthood (Arnett, 2004), thus how one assesses their job satisfaction is an important indicator of young adult well-being. Based on the literature reviewed, MIL was expected to be positively associated with young adults' job satisfaction.

Financial Satisfaction

Financial satisfaction is a subjective assessment of how much money one has, one's ability to manage money, and ability to meet financial goals (Drever et al., 2015). Financial satisfaction encompasses more than objective measures of one's financial situation; it includes one's feelings of control, security, and ability to financially enjoy life (Consumer Financial Protection Bureau, 2015). Thus, although young adults are at the beginning stages of accumulating financial assets, they may still experience financial satisfaction, provided that they are able to meet their financial demands (Stein et al., 2013). Although there are no studies examining the connection between MIL and financial satisfaction, financial satisfaction is a strong predictor of overall well-being (Gerrans et al., 2014; Ng & Diener, 2014; Robb & Woodyard, 2011). For this reason, MIL was expected to be positively associated with young adults' financial satisfaction.

Long-term Impact of Student Loan Indebtedness on Satisfaction

Despite empirical support of the negative long-term impact of student loan indebtedness (Gecowets, 2017), little is known about the early repayment process. However, there is some evidence to suggest that the benefits of a college education may

not be fully realized until after the debt is repaid. For example, Korankye and Kalenkoski (2021) found that adults who continued to carry student loan debt reported lower levels of life satisfaction and lower levels of income. In a separate study focusing on recent college graduates, Canche (2017) found that those who had repaid their student loans within five years of graduation reported higher incomes compared to those still in repayment; there were no differences between the groups in levels of homeownership. Thus, it is possible that the levels of MIL and satisfaction may differ between those that have paid off their loans and those who are still repaying their loans.

The Mediating Role of Self-Concept

The theoretical model (Hooker et al., 2018) states that self-concept (e.g., affect and mastery) mediates the association between MIL and satisfaction. As previously defined, both self-esteem and self-efficacy contribute to one's self-concept (Shavelson et al., 1976). Although both self-esteem and self-efficacy are associated with satisfaction and well-being, there is evidence of separate and distinct effects of each aspect on both motivation and satisfaction (Chen et al., 2004; Deuling & Burns, 2017). Previous studies have shown that self-esteem is positively associated with higher levels of psychological well-being (e.g., autonomy, purpose in life; Paradise & Kernis, 2002) and job satisfaction (Judge & Bono, 2001). Further, Atac et al. (2018) found that young adults with greater self-esteem viewed themselves as being able to adapt to the demands of their career compared to those with low self-esteem. Arsandaux et al. (2020) found that higher levels of self-esteem in adolescence were positively associated with meeting personal goals and decreased alcohol consumption ten years later. In that same study, the researchers also found that young adults' current levels of self-esteem were more predictive of concurrent

outcomes. Compared to those with low self-esteem, young adults with high self-esteem reported higher life satisfaction and fewer depressive or anxiety symptoms (Arsandaux et al., 2020). Self-esteem has also been found to mediate the relationship between social support and life satisfaction among college students (Kong et al., 2013). Specifically, higher levels of social support were associated with higher self-esteem and in turn higher levels of life satisfaction.

There is also support of a positive association between self-efficacy and higher levels of life satisfaction (Xi et al., 2017), academic success (Alyami et al., 2017), and job satisfaction (Judge & Bono, 2001; Pinquart et al., 2003). Perceived self-efficacy has been shown to be associated with higher levels of life satisfaction when young adults believed they could positively interact with their family and friends (e.g., talking about feelings, Steca et al., 2009). One study found that self-efficacy mediated the association between MIL and physical activity (Rush et al., 2019), specifically, higher levels of MIL were associated with higher self-efficacy that led to higher levels of physical activity. Based on the literature reviewed, in this study self-concept (i.e., self-esteem and financial self-efficacy) was expected to mediate the association between MIL and satisfaction.

The Moderating Role of Repaying Debt

Although all participants in this study successfully completed college, which should increase both their self-esteem and self-efficacy, it is possible that self-concept may look different between young adults who are still paying back their student loans and those who have repaid loans. Self-efficacy is often a reflection of achieving a goal (e.g., academic grades; Shim & Ryan, 2005) and may decrease if one feels like they have failed at something (Smith et al., 2006). Changes in self-efficacy are often a reflection of

learning from experiences (Raelin et al., 2011). In specific contexts, self-efficacy beliefs reflect feelings of capability in specific situations, such as at work or with one's finances (Bandura, 1991; Grether et al., 2018). Within the domain of finances, higher levels of financial self-efficacy have been associated with better outcomes such as financial satisfaction and feeling like an adult (Xiao et al., 2014) and healthy financial behaviors (e.g., saving for retirement; Gamst-Klaussen et al., 2019; Lown et al., 2015). However, there is some evidence that in the context of financial insecurity, financial self-efficacy may change (Lim et al., 2014). Financial insecurity is associated with decreased well-being (Weinstein & Stone, 2018) and a lack of sense of control (Chesters et al., 2018). While borrowers may experience an increase in feeling overwhelmed in the repayment process (Zerquera et al., 2013), or guilt and shame due to still having the student loan debt (Feige & Yen, 2021; Nissen, 2018), these feelings seem to be compartmentalized to the financial domain.

Although repaying student loans is a common financial obligation for many young adults, the impact of the experience may be associated with poorer health and more depressive symptoms (Tran et al., 2018). In one study, whereas younger young adults (i.e., 18-27 years old) reported an increase in self-concept (e.g., mastery and self-esteem) due to carrying student loan debt, older young adults (i.e., 28-34 years old), reported a significant decrease in self-concept (Dwyer et al., 2011). The researchers speculated that the benefits of carrying debt is short-term and that the continued stress of repaying student loans has a long-term negative effect on borrowers' belief that they were out of control and unworthy. Similarly, borrowers who associated their own student loan debt with feelings of failure rather than feelings of responsibility, had worse health

outcomes (e.g., higher blood pressure, Sweet, 2018). Dahling et al. (2013) found that while financial strain negatively impacted self-efficacy, this relationship was moderated by the resources available in the community where the participant lived. Low-income borrowers were more likely to be behind on loan payments (Farrell et al., 2020) which could indicate feelings of not being financially capable, in other words experience a lower level of financial self-efficacy. Another study found that the association between financial well-being and financial stress was stronger for those in the higher income group compared to those in the lower income group (Choi et al., 2020). In contrast, one study found that carrying financial debt did not negatively impact borrowers' self-esteem even though it did lower their levels of life satisfaction (Tsai et al., 2016).

Dirlam and Merry (2021) demonstrated that the boost to self-esteem after college graduation was reduced after accounting for measures of adolescent self-esteem. These findings make sense since self-esteem is generally stable (Wagner et al., 2016) and over time tends to increase with age (Orth & Robins, 2014). Because self-esteem reflects an internalized sense of self-worth, it may be independent of fluctuating financial contexts due to student loan repayment. Although higher levels of self-esteem are associated with higher levels of financial knowledge and better financial behaviors (Tang & Baker, 2016), self-esteem may not be dampened due to continued loan repayments. Because of the stress associated with repaying student loans in the context of post-college adult life, it is possible that the stress of student loan repayment may disrupt the self-reflection process for those who are still in repayment. In addition to mediating the association between MIL and satisfaction, it is possible that the mediation process might differ

between those who have paid off their loans and those who are still repaying because of the financial stress associated with continued loan repayment.

The Current Study

The goal of the study was to investigate the connection between MIL, a subjective marker of a successful adult transition, and satisfaction among young adult student loan borrowers five years after graduation. Relying upon Hooker et al.'s (2018) model, I investigated if self-concept, operationalized as self-esteem (affective) and financial self-efficacy (financial mastery), mediated the association between MIL and satisfaction. As the literature provides support that financial circumstances may undermine the self-concept, I also tested the model under two conditions to see if the model operated in the same way for young adults who paid off their loans (e.g., Loans Paid group) and those who were still in the repayment process (e.g., Loans in Repayment group). Based on this conceptual model and the literature reviewed, I formulated the following hypotheses:

Hypotheses

Hypothesis 1 (H1): MIL will have a direct and positive effect on satisfaction (i.e., life, job, financial).

Hypothesis 2 (H2): Self-concept (i.e., self-esteem and financial self-efficacy) will mediate the association between MIL and young adult satisfaction (i.e., life, job, financial) for both groups (e.g., Loans Paid group, Loans in Repayment group; Hypothesis 2a). Because the continuing debt obligation of those who are still in the repayment process may undermine their self-concept, the mediation process will operate differently for the two groups (Hypothesis 2b).

Method

Study Design

For this study, I conducted secondary data analyses using a subsample of young adults who participated in a larger longitudinal research study, the Arizona Pathways to Life Success for University Students (APLUS). Four waves of survey data have been collected from a 2007 cohort of first-year college students at a major public university in the American Southwest: Wave 1 baseline data, collected in spring 2008 (age 18-21), Wave 2 data, collected in fall 2010 (age 21-24), Wave 3 data, collected in spring-summer 2013 (age 24-27) and Wave 4 collected in summer 2016 (ages 26-29). Because of my interest in focusing on the repayment process while also juggling the financial demands of adult life, the key variables were drawn from Wave 4. However, I used Wave 1 baseline measures of self-concept (i.e., self-esteem and financial self-efficacy) as covariates on the respective Wave 4 latent constructs to provide a clearer understanding of the impact of student loan debt on self-concept during the repayment process (Dwyer et al., 2011). Given known associations with the domains of satisfaction, I also included Wave 1 baseline data as covariate variables for both family income (King et al., 2016; Olson, 2016) and participant current income (Joshanloo, 2018; Ward & King, 2016).

Sample

The sample for this study included only those participants who completed the Wave 4 survey and who took out undergraduate student loans (n=373, 43.6%). For the current study, I further restricted the sample to those participants who were engaged in the repayment process by excluding those who answered one of three response items to the student loan repayment status variable (e.g., not yet due, in forbearance, in default;

n=48, 12.9%) and those missing (*n*=2, 0.5%). The final analytical sample consisted of 323 participants (37.8% of the Wave 4 participants). Current participants' loan status included: 25.7% (*n*=96) loans paid off and 60.9% (*n*=227) still repaying loans. Among those still in repayment, participants reported that their loans were almost paid (*n*=76, 20.4%); On time payments (*n*=85, 22.8%); Behind on payments (*n*=41, 11%); and Unable to make payments (*n*=25, 6.7%).

The demographics of the analytic sample included: 64.1% female; 60.3% White/Caucasian; 22.3% Hispanic/Latino; 7.0% Asian/Asian American: 4.8% African American/Black; 2.7% Other; 2.1% Native American; and 0.8% Pacific Islands. First-generation college students made up 23.1% of the sample and family socioeconomic status (SES) included lower (46%), middle (24.1%), and higher (29.9%) income families. Participants' current income levels included: 17.7% less than $24,999; 25.2% between $25,000-$39,999; 26.0% between $40,000-$59,999; 14.5% between $60,000-$74,999; and 16.6% more than $74,999. Most of the participants were employed fulltime (83.7%), followed by part-time employment (5.3%), self-employed (3.5%), unemployed and looking (3.1%), employed part-time but looking for fulltime employment (2.6%), and unemployed and not looking (1.8%). The mean student loan debt for borrowers in the Loans in Repayment group was $28,472, range $15-$150,000.

Measures

Meaning in life (predictor) variable (Steger et al., 2006).

The Meaning in Life Questionnaire is a 10-item, validated assessment tool that measures two dimensions of meaning in life (e.g., presence of meaning and search for meaning; Steger et al., 2006). Presence of meaning refers to feeling that one's life has

meaning and purpose, whereas search for meaning refers to striving to find meaning and understanding in their lives (Steger, 2009). Because the present study was focused on how having MIL relates to satisfaction, I used the measure of presence of meaning in these analyses. Participants were asked to respond to each item following the stem phrase: Please take a moment to think about what makes your life and existence feel important and significant to you. Please respond to the following statements as truthfully and accurately as you can, and also please remember that these are very subjective questions and that there are no right or wrong answers. The five MIL items were: "I understand my life's meaning", "My life has a clear sense of purpose", "I have a good sense of what makes my life meaningful", "I have discovered a satisfying life purpose" and "My life has no clear purpose" (reversed). Valid responses ranged from 1 (*absolutely true*) to 7 (*absolutely untrue*). Higher scores indicated higher levels of MIL (M=4.92, SD=1.33, Range=6). Coefficient α was .900.

Satisfaction (outcome) variables.

Life satisfaction (Diener et al., 1985). Participants were asked five questions about level of satisfaction with their current life that followed the stem phrase: Indicate to what extent you agree with the following statements. The five items included: "In most ways, my life is close to my ideal"; "The conditions of my life are excellent"; "I am satisfied with my life"; "So far I have gotten the important things I want in life"; and "If I could live my life over, I would change almost nothing". Valid responses ranged from 1 (*strongly disagree*) to 5 (*strongly agree*) with higher scores indicating higher levels of life satisfaction (M=3.46, SD=0.94 Range=4). Coefficient α was .913.

Job satisfaction (Serido & Shim, 2014). Participants were asked three questions about their level of satisfaction with their current employment situation that followed the stem phrase: How satisfied are you with your… The three items included: "Current employment situation?"; "Future employment prospects?"; and "Current work/life balance?" Valid responses ranged from 1 (*very dissatisfied*) to 5 (*very satisfied*) with higher scores indicating higher levels of job satisfaction (M=3.76, SD=0.98, Range=4). Coefficient α was .790.

Financial satisfaction (Serido et al., 2010; Shim et al., 2010). Participants were asked three questions about their level of satisfaction with their current financial status that followed the stem phrase: Please read each of the following statements concerning satisfaction with your current financial status and indicate to what degree it reflects your own thoughts and feelings. The three items included: "I am satisfied with my current financial status"; "I have difficulty paying for things" (reversed); and "I am constantly worried about money" (reversed). Valid responses ranged from 1 (*strongly disagree*) to 5 (*strongly agree*) with higher scores indicating higher levels of financial satisfaction. (M=3.15, SD=1.05, Range=4). Coefficient α was .806.

Self-concept (mediator) variables.

Self-esteem (Barber et al., 2001). Participants were asked four questions about their level of self-esteem that followed the stem phrase: How often do you… The four items included: "feel sure of who you are (what kind of person you are)"; "feel good about yourself?"; feel very satisfied with your life the way it is?"; and "feel satisfied with yourself the way you are?" Valid responses ranged from 1 (*never*) to 5 (*daily*) with higher

scores indicating higher levels of self-esteem (*M*=3.68, *SD*=0.79, Range=4). Coefficient α was .840.

Financial self-efficacy (Shim et al., 2009). Young adults were asked three questions to assess their self-assessment of their ability to perform certain behaviors that followed the stem phrase: Please read each item and indicate to what degree it reflects your own thoughts and feelings. The three items included: "I am satisfied with the way I pay my bills"; "I feel good about my money management abilities"; and "Sometimes I don't like the way I manage my finances" (reversed). Valid responses ranged from 1 (*strongly disagree*) to 5 (*strongly agree*) with higher scores indicating higher levels of financial self-efficacy (*M*=3.52, *SD*=0.94, Range=4). Coefficient α was .775.

Covariate variables.

Four wave 1 variables were included as covariates in the analyses: baseline measures of self-concept (i.e., self-esteem and financial self-efficacy) as covariates for the respective latent constructs, and two demographic variables family income and participants' current income. Given the current sample size and the complexity of the model, no other covariates were included as that would have further decreased the power to detect the hypothesized mediating effects.

Self-esteem (Barber et al., 2001). See description above. Baseline levels of self-esteem measured at Wave 1 (*M*=3.76, *SD*=0.69, Range=4). Coefficient α was .782.

Financial self-efficacy (Shim et al., 2009). See description above. Baseline levels of financial self-efficacy measured at Wave 1 (*M*=3.26, *SD*=0.86, Range=4). Coefficient α was .745.

Participants' family income levels. Measured at Wave 1: 1=Less than $50,000 (*n*=68, 21.3%); 2=$50,000-$99,999 (*n*=119, 37.2%); 3=$100,000-$200,000 (*n*=111 34.7%); and 4=more than $200,000 (*n*=22, 6.9%).

Participants' current income. Measured at Wave 4: 1=Less than $24,999 (*n*=42, 13.0%); 2=Between $25,000–$39,999 (*n*=80, 24.8%); 3=Between $40,000–$59,999 (*n*=92, 28.5%); 4=Between $60,000–$74,999 (*n*=50, 15.5%); and 5=More than $75,000 (*n*=59, 18.3%).

Data analytic plan

Preliminary analyses included descriptive and correlational analyses to examine the associations among the variables for each group (i.e., those who have paid off their student loans and those who were still repaying their student loans). Confirmatory factor analyses (CFA) were conducted for each latent construct to ensure the reliability and validity of the measures (Schreiber et al., 2006). Then, I conducted a two-step multigroup structural equation model (SEM) to test the study hypotheses and compare across groups to determine if the associations were the same or different (Byrne, 2012). In the first step I estimated the reduced SEM model (e.g., without mediation) to examine the association between MIL and satisfaction. In the second step I estimated the full SEM model (e.g., with mediation by group) to determine if self-concept mediated the association between MIL and satisfaction and if the process differed between the groups. Analyses were computed using IBM SPSS Statistics 24.0 (IBM, 2016) and Mplus 8.1 (Muthén & Muthén, 2017) statistical software with the a priori alpha level set at 0.05.

Results

Preliminary Analyses

Preliminary analyses confirmed that the data met the basic assumptions of normality, linearity, were continuous variables, and were suitable for using SEM (e.g., measure validity screening; model identification; and power analyses). The results are detailed in the Supplemental Materials in the section titled, *Testing Assumptions for Structural Equation Modeling*. Missing data was found in less than 1% of the data (see Table 11 and 12) and were assessed using the chi-square missing completely at random test (MCAR; Little, 1988) in SPSS. The results were not significant and failed to reject the null hypothesis, χ^2 (9, N =323) =10.10, p = .342, thus meeting the assumption of SEM, while acknowledging that another variable might be missing from the analyses. To account for missing data in the SEM analyses, maximum likelihood estimation with robust standard errors (MLR) was used to estimate model parameters (Myung, 2003).

Initial Data Analysis

Descriptive Analysis of Variables

Descriptive statistics (means and standard deviations) confirmed that all study variables fell within the expected range and were generally slightly above the mid-range for both groups (see Table 11, cols. 2-3). *T*-test results showed significant differences between the two loan status groups in two of the three satisfaction outcome variables (see Table 11, cols. 4-5). Compared to those who were still repaying their loans, borrowers who paid off their loans reported higher life satisfaction (t(320) = 2.495, p = .013) and financial satisfaction (t(321) = 4.033, p < .000). Regarding self-concept, compared to those who were still repaying their loans, borrowers who had paid off their loans reported

higher levels of self-esteem ($t(321) = 2.118$, $p = .035$). Although only approaching significance, compared to those who were still repaying their loans, borrowers who had paid off their loans reported higher levels of financial self-efficacy ($t(320) = 1.785$, $p = .075$). MIL did not differ between the two groups. The results of the chi-square test (see Table 12) showed significant differences in two demographic characteristics: First-generation college students were more likely than those who were not first-generation college students to be in the loan repayment group (χ^2 (1, N=323) =7.56, $p = .006$) whereas borrowers who had higher current income were more likely to be in the loan paid group (χ^2 (4, N =323) =9.71, $p = .046$). No other demographic characteristics were significantly different between the two loan status groups.

Pearson bivariate correlations were moderate to high, and in the expected direction for both groups (see Table 13). Overall, the correlations indicate that multicollinearity was not a problem and that each variable measured a unique construct, with one exception. For the Loans Paid group, self-esteem and life satisfaction were very highly correlated ($r(95) = .857$, $p < .000$). As expected, MIL was significantly and positively correlated with all three satisfaction outcome variables, and both self-concept mediators for both groups. Similarly, both self-concept mediators were significantly and positively correlated with all three satisfaction outcomes for both groups. Self-esteem and financial self-efficacy were moderately correlated for both groups as well.

Confirmatory Factor Analyses (CFA) Results

Latent constructs were created for each of the key variables. I computed a multigroup CFA (e.g., measurement model) to confirm that the measures I used were valid based on the current sample (i.e., assess the dimensionality, reliability, and validity

of the proposed latent constructs; Schreiber et al., 2006). Because the measures have previously been validated (Byrne, 2012), the reliabilities for each scale were strong (α=.768-.907). Each scale included more than one indicator measure, thus I expected that convergent validity would be supported. I assessed model fit using the model-fit indices outlined by Hu and Bentler (1999): CFI value greater than or equal to .90; RMSEA value less than or equal to .06; and SRMR value less than or equal to .08.

The final multigroup CFA model had good fit (See Table 14; χ^2 (426) = 666.21, p < 0.000, CFI = 0.94, RMSEA = 0.05, SRMR = 0.06). All factor loadings were above .48. Table 15 shows the standardized and unstandardized coefficients and the scale reliability for the final multigroup CFA. Because the default Mplus software setting allows error terms to freely covary, as part of the model testing process I examined the modification indices (MI) to determine if any modifications should be made to improve model fit (i.e., covary specific indicators; Hooper et al., 2008). The following four post hoc modifications were added to the final measurement model: Loans Paid group added the residual covariance for the financial satisfaction indicator variable two and three, MIL indicator variable one and four; Loans in Repayment group added the residual covariance for the self-esteem indicator variable one and three, MIL indicator variable two and three.

To determine if the latent variables operated similarly across the two groups (i.e., test for measurement invariance), I computed a CFA for each group separately (Byrne, 2012). Both CFAs had acceptable model fit. The indicators loaded in similar patterns and were above .48, which means that the key measures have the same meaning for both the Loans Paid group and the Loans in Repayment group. Based on these results, it was appropriate to move forward with hypothesis testing. See Supplemental Materials Table

S4 and Table S5 for the detailed results. Additionally, prior to testing the study hypotheses, I further tested the SEM assumptions by first running the models separately for each group (Byrne, 2012). For both groups, the result of the chi-square difference test was statistically significant indicating that the full model compared to the reduced model was a better fit for the data. See Supplemental Materials Table S4 and Table S5 for the detailed results.

Multigroup structural equation model

I tested the direct effects hypothesis (H1) by fitting a reduced (i.e., no mediation) multigroup SEM model and then fitting a full multigroup SEM model to test the mediation hypothesis (H2, i.e., moderated mediation). To determine best final model fit, I compared the final reduced and full models using a Chi-Square difference test ($\Delta\chi^2_{df1-df2}$; Hox & Bechger, 1998). As part of the model testing process, I examined constrained (i.e., pathways were equal across both groups) and non-constrained (i.e., pathways were allowed to operate freely across both groups) models (Byrne, 2012). Then, I released constrained parameters one at a time to ascertain change in model fitness. I used the Satorra-Bentler Scaled Chi-Square Difference Test to gauge the change in fit statistics between the partially constrained and non-constrained models because I used MLR to estimate the model parameters (Satorra & Bentler, 2010). If a constrained parameter decreased model fit then it was determined that the parameter operated differently across groups and was unconstrained. Constrained parameters that did not deteriorate model fit, remained constrained in the final model.

Direct and Positive Effect of MIL on Satisfaction (Hypothesis 1)

To test for the direct effects of MIL on satisfaction (i.e., life, job, financial) for each of the groups, I fit a reduced (i.e., no mediation) multigroup SEM model. As hypothesized, MIL had a direct and positive effect on satisfaction (i.e., life, job, financial) for both groups, thus finding support for H1. The results of the final reduced multigroup SEM model had three non-constrained pathways and acceptable model fit (See Table 16; χ^2 (244) = 346.35, $p < 0.000$, CFI = 0.97, RMSEA = 0.05, SRMR = 0.06). Two control variables were included in the final model (e.g., family income, participants' current income). Results of the Satorra-Bentler Scaled Chi-Square Difference Test comparing the non-constrained model and releasing individual paths in the constrained model was statistically significant ($\Delta\chi^2_{(39)}$=175.03, p<.000), indicating that the paths were not equivalent between the two groups, providing justification for looking at each of the groups separately as the pathways operate differently. See Figure 6 depicting the factor loadings, residual error terms, and error covariances among the latent variables for both groups.

Self-concept Mediating MIL and Satisfaction (Hypothesis 2)

To test the second hypothesis, that self-concept would mediate the association between MIL and satisfaction, I examined the significant direct and indirect effects of MIL on satisfaction (i.e., life, job, financial) with self-concept (i.e., self-esteem, financial self-efficacy) included as a mediator. I found partial support for H2a (i.e., self-concept as mediator) and full support for H2b (i.e., mediation differed by loan group). Regarding the association between MIL and life satisfaction, self-concept partially mediated the association between MIL and life satisfaction for the Loans Paid group, but fully

mediated the association between MIL and life satisfaction for the Loans in Repayment group. Regarding the association between MIL and job satisfaction, self-concept fully mediated the association for the Loans Paid group, partially mediated the association for the Loans in Repayment group. Regarding the association between MIL and financial satisfaction, self-concept fully mediated the association for the Loans Paid group, and partially mediated the association for the Loans in Repayment group, similar to the results for job satisfaction. The results of the final full multigroup SEM model had three non-constrained pathways and acceptable model fit (See Table 17; χ^2 (635) = 1016.59, p < 0.000, CFI = 0.92, RMSEA = 0.06, SRMR = 0.07). Four control variables were included in the model (i.e., family income, participants' current income, baseline self-esteem, baseline financial self-efficacy). Results of the Satorra-Bentler Scaled Chi-Square Difference Test comparing the constrained model and partially constrained model was statistically significant indicating that the partially constrained model was a better fit for the data ($\Delta\chi^2_{(124)}$=198.024, p<.000) and that the pathways in the model operated differently for the two groups. See Figure 7 for the Loans Paid group and Figure 8 for the Loans in Repayment group depicting the factor loadings, residual error terms, and error covariances among the latent variables for the final full models.

Discussion

Guided by the Hooker et al. (2018) conceptual model, the present study investigated whether self-concept (i.e., self-esteem, financial self-efficacy) mediated the association between MIL and satisfaction (i.e., life, job, financial) and if so, if the mediation process differed by student loan repayment status (e.g., Loans Paid group, Loans in Repayment group). Using data from a cohort of young adult student loan

borrowers five years after graduation, the findings suggest that young adults who have paid off their loans are doing better (i.e., higher levels of life satisfaction, financial satisfaction, and self-esteem) than those who are still repaying. Consistent with the extant literature, I found support that MIL was positively associated with satisfaction (i.e., life, job, financial). The study also provided partial support that self-concept mediated the association between MIL and satisfaction. However, the associations differed by student loan repayment status.

Meaning in Life as a Subjective Marker of Adult Success

Although this study found no differences in MIL between those who had paid off their loans and those who were still repaying, consistent with the literature (Bronk et al., 2009; Morgan & Robinson, 2013), there was a positive direct association between MIL and satisfaction (i.e., life, job, financial). This finding provides some support for the importance of assessing MIL from the perspective of young adults as a subjective marker of a successful adult transition (Mayseles & Keren, 2014). However, there were differences in levels of satisfaction: compared to those still repaying, borrowers who paid off their loans reported higher life and financial satisfaction, but job satisfaction was not different between the groups.

While all borrowers in this study had achieved the goal of graduating from college, it is possible that borrowers who had repaid their student loans were also feeling accomplished in paying off their loans. When they paid off their loans, they may have received a bump to both their life and financial satisfaction and are pursuing other life goals (e.g., home ownership). In contrast, borrowers still in repayment may have had to delay pursuing other life goals given the financial demands of repaying student loans,

which may diminish their life and financial satisfaction. It makes sense that borrowers who made more money were more likely to be in the loans paid group and have higher financial satisfaction, suggesting that their job offered an income that supported loan repayment. However, the connection to job satisfaction is more elusive and more research is needed on what contributes to job satisfaction for student loan borrowers. Job satisfaction is not just about making money (e.g., recognition, flexibility; Aziri, 2011); it is also about having a career that you enjoy. It is possible that those who are still repaying their loans may have other career goals, which is influencing their job satisfaction.

Young adults in college are often searching for purpose and a meaningful career (Adams, 2012), which can lead graduates to choose careers in the helping professions (e.g., career counseling, Allan et al., 2017). But less is known about student loan borrowers and the careers that they choose. For instance, young adults interested in helping professions may need further education such as a master's degree (such as social work and teaching), but do not offer the same level of income as undergraduate degrees in business (BLS, 2021). For some borrowers, there may be a tradeoff: choose the career you want despite having a lower income or choose a less desirable career that has a higher income that can support loan repayment. Additionally, first-generation college students (FGCS) were more likely than those who were not first-generation college students to still be repaying their loans. This could reflect the desire of FGCS to give back to their family and community (Capannola & Johnson, 2020; Ives & Castillo-Montoya, 2020; Storlie et al., 2016). More research is needed to understand student loan borrowers who are working in helping professions and if they are struggling to repay their loans.

The Importance of Self-Concept

Consistent with previous research demonstrating the long-term impact of financial stress on self-concept (Chesters et al., 2018; Tsai et al., 2016; Weinstein & Stone 2018), compared to those who have paid off their loans, those who were still repaying their loans reported lower levels of self-esteem and financial self-efficacy. This makes sense because paying off student loans can be stressful (Lusardi et al., 2016; Walsemann et al., 2015). However, findings from this study suggest that continued student loan debt repayment affects not only the levels of young adults' self-concept, but also the mediation process.

According to the Hooker et al. (2018) conceptual model, self-concept is the linking mechanism between MIL and satisfaction. I found partial support for this model although it varied by loan repayment status. For those who have paid off their loans, self-concept was less associated with their overall life satisfaction. I am speculating that perhaps something else is driving their overall satisfaction (i.e., relationships, parenting) and now that they have paid off their loans they can pursue other life goals. For example, it could be that paying off student loans increased their feelings of self-worth and confidence in their ability to manage their money. Thus, it is possible that those who have paid off their loans, feel that the investment was worth it because they are experiencing the benefits of having the degree without the financial stress of the loan payments. However, future research is needed to better understand the connection between achieving a goal (e.g., paying off student loans) and pursing new goals.

On the other hand, for those who were still repaying, the opposite pattern was observed: self-concept was impactful for life satisfaction and less so for job and financial satisfaction. It is possible that these borrowers are satisfied with their job but that the job

does not pay enough to be financially stable. Unexpectedly, there was a negative and direct association between MIL and financial satisfaction. That is, after including self-concept in the model, high MIL was associated with lower financial satisfaction for student loan borrowers still repaying their loans. Because MIL reflects one's purpose in life and borrowers in repayment had lower incomes compared to those who have paid off their loans, one potential explanation may be that some borrowers chose jobs that aligned with their MIL but may not have paid as well. There is some evidence that having student loans is driving some young adults away from meaningful careers because of the financial need to repay the loans (Doran et al., 2016; Field, 2009; Gecowets, 2017). Similarly, popular press articles are reporting that young adults may be choosing jobs that pay well but sacrifice their satisfaction (Hsu, 2019; Safier, 2019). For some borrowers, even if they have high self-esteem and financial self-efficacy, they may not have a job that can financially support loan repayment.

There is some evidence that how young adults perceive the value of their debt impacts their overall outcomes (Haultain et al., 2010; Williams, 2014). If debt is viewed as an investment for their future, then repaying their debt is accepted as part of their responsibility (Burcher, 1st study) and could positively impact their self-concept (Dwyer et al., 2011). Borrowers who underestimated the future cost of borrowing, are likely to feel overwhelmed by the payments (Mueller, 2013; Zerquera et al., 2013). If carrying debt leads to feelings of guilt and shame (Lazzarato, 2012), borrowers are likely to experience negative emotional and physical outcomes (Sweet, 2018). Financial insecurity undermines sense of control (Chesters et al., 2018) and can lower levels of well-being (Weinstein & Stone, 2018). Borrowers who were still making payments may not feel like

they have control of their finances or feel confident that they will be able to ever repay their loans, which could be impacting their overall sense of self-worth.

Limitations and Future Research

Several limitations need to be considered. First, the data for this study was collected from a single cohort from the same university and although it was reflective of the university demographics, it may not be representative of other university samples. Second, although the sample was drawn from a longitudinal study, the key study variables were drawn from the most recent wave of data collection. Although I did account for Wave 1 measures of self-concept, MIL was only measured in the Wave 4 survey. Thus, the study is cross-sectional and it is not possible to determine the causal directions in these pathways. The theoretical model (Hooker et al., 2018) posits that MIL directly influences self-concept. Considering that MIL develops early in life and acts as a basis for how one interprets experiences (Park, 2010; Steger, 2009), it makes sense that MIL would contribute to how one self-reflects and evaluates their self-concept. But it is also possible that self-concept influences MIL, either directionally or in a bidirectional relationship. Future research that examines the covarying associations between MIL and self-concept is needed to examine these associations as an unfolding process. Third, considering that borrowers who were still repaying were comprised of many different repayment statuses (e.g., on time payments, behind on payments), it is possible that the findings in the study may look different between those groups. However, the sample sizes were too small to test the full model. But, the findings in the study still found differences between those who had paid off their loans and those who were repaying their loans, suggesting that any repayment status may be impacting borrowers' self-concept. More

research is needed to examine varying repayment statuses. Fourth, this sample of young adults borrowed prior to the Great Recession, but then entered a depressed job market with high unemployment after graduating (Bialik & Fry, 2019; Kalleberg, 2013; Shierholz et al., 2013). It may be that these associations may look different for more recent college graduates. However, the findings from this study may be helpful in studying students who graduated during the Covid-19 pandemic.

Despite the limitations, this study has important implications. First, interventions that move beyond financial management for repaying student loans, to include strategies for strengthening self-concept may be helpful in motivating young adult student loan borrowers to continue pursuing their goals (e.g., starting a family or buying a home) and improve their mental health. Because MIL has positive associations with general and domain specific satisfaction, helping borrowers to think about their future career goals before graduation may help them plan accordingly to juggle the multiple financial demands of adult life. This may be especially important for students who are pursuing helping professions, who may benefit from interventions aimed at promoting self-care and personal well-being (Enns et al., 2018), such as highlighting strategies that boost their self-esteem and self-efficacy. Second, high school counseling programs could focus on expanding FGCS perspective of careers that give back, such as pursuing STEM careers (Allen et al., 2015; Smith et al., 2014). Policy initiatives should explore options that support borrowers who are financially struggling and work in helping professions, such as providing tax incentives for those working in the public and human services sector. Currently the Public Service Loan Forgiveness Program is one option, but according to the Government Accountability Office Report approximately 99% of

applicants were denied (GAO, 2019). The current sample graduated five years prior to data collection, which is within the established repayment timeline. Although more attention has focused on student loan relief, few studies have examined the benefit of rapid repayment of student loans. Further research should examine if other cohorts experience the same level of student loan indebtedness or if measures change over time as more young adults are able to repay their loans.

Conclusion

Considering the burgeoning economic impact of student loans on the community in addition to the individual (Friedline et al., 2020; Gecowets, 2017), understanding the long-term impact of student loan indebtedness is urgent. Due to the Covid-19 pandemic and the devastating economic impact (Kalleberg, 2020; Moen et al., 2020), current policy initiatives are being debated as to the value of forgiving student loans. It is no surprise that repaying student loan debt is a serious concern for many Americans and that student loan repayment is a top stressor among young adults (Lusardi et al., 2016; Walsemann et al., 2015). Results from this study provide evidence of the potential benefits forgiving student loans could have for the individual and society (Di Maggio et al., 2019; Dobbie & Song, 2015). Borrowers who paid off their loans within five years of graduating, reported higher levels of satisfaction, self-concept, and income. It is possible that debt relief for student loan borrowers could also result in increased well-being (Ong et al., 2019). Higher education institutions should consider also focusing counseling interventions on promoting self-esteem and self-efficacy (Raelin et al., 2011), beyond focusing solely on financial education for student loan borrowers. Counseling and vocational psychology are increasingly focused on helping college students choose meaningful careers (Adams,

2012; Dik et al., 2015), especially as more young adults express a desire for their work to matter and provide purpose (Bloch, 2005; Dik, Byrne, & Steger, 2013).

Chapter 4

CLOSING THOUGHTS AND FUTURE DIRECTIONS

Student loan debt has become an accepted part of the higher education experience (Christie & Munro, 2003; Huelsman, 2015; Zerquera et al., 2016), but the increase in student loan default and income-driven repayment program participation is concerning (Burk & Perry, 2020; Mueller & Yannelis, 2019). Access to student loans was intended to provide increased opportunities for success (Burk & Perry, 2020) that could eliminate the wealth gap. But the mounting student loan debt may actually be contributing to reproduced inequality (Houle & Addo, 2019; Kim et al., 2016; Zajacova & Lawrence, 2018), especially due to the disparities surrounding who uses student loans and some families may be at a greater disadvantage because of student loan repayment. Thus, in the context of increasing debt-financing, the value and meaning of higher education may not be the same if you have to repay loans. The two current studies sought to better understand the association between higher education and adult success from the perspective of young adults who borrowed to pay for their education during a period of changing economic conditions (i.e., 2008-2016; Bialik & Fry, 2019; Kalleberg, 2013; Shierholz et al., 2013).

Study one examined student loan advice from the perspective of those who were living with and paying off student loan debt five years after graduating. Findings from both the qualitative and quantitative analyses demonstrated that future costs and benefits of using student loans were not as clear as they once were. Borrowers strongly recommended only using loans if it was going to lead to a career that pays enough money to repay the loans. This suggests that the value of education was not placed on simply

getting a degree, but in getting the right degree, and ultimately, financial security. Additionally, first-generation college students (FGCS) may be questioning the value of higher education as they navigate the repayment process. The findings in this study suggest that there may be multiple higher education social contracts, especially in the context of repaying student loans and expectations held by borrowers. For example, the advice given by FGCS in study 1 was more likely to have a negative affect.

Study two examined the connection between meaning in life (MIL), as a subjective marker of a successful adult transition, and satisfaction in multiple domains (e.g., life satisfaction, job satisfaction, financial satisfaction) among borrowers five years after graduation. Findings demonstrate that young adults who have paid off their loans are doing better (e.g., higher levels of life satisfaction, financial satisfaction, and self-esteem) than those who are still repaying, but their MIL was similar. There was support that self-concept (i.e., self-esteem and financial self-efficacy) mediated the association between MIL and satisfaction although this process operates differently for those who have paid off their loans compared to those who are still repaying. This suggests that student loan debt may be undermining young adults' self-concept, specifically regarding domain specific satisfaction.

The current research fills a gap in the student loan research literature by examining the long-term repayment experience of student loan borrowers in the context of the normative expectations of life quality among college-educated young adults. Rather than comparing those who borrowed to their non-borrowing peers, these studies focused solely on differences within borrowers. Together, the two studies may suggest that five years after graduating, the benefits of borrowing to pay for education may not be

the same for all student loan borrowers. Although borrowers expressed wanting to repay their loans, some of them appear to be struggling to pay. In the context of a historic shift in higher education and financial institutions, efforts should be made to support borrowers in repaying their loans while also supporting their well-being, career choice, and financial stability.

I focused on the lived experience of student loan borrowers who have participated in the repayment process because a disproportionate number of contemporary young adults who are struggling with student loan debt are persons of color, or from working and lower-resourced families (Addo et al., 2016; Carlson, 2020; Baker et al., 2017; Furquim et al., 2017). Both studies make a unique contribution about a growing concern regarding higher education and economic inequality. Findings offer some support that the costs and benefits of debt-financed education impact the individual, but it may also impact communities and society. However, the long-term financial consequences of student loan debt may be tempered by the career choice and income earned by the borrower. Earning a college degree opens doors for many careers, but not all careers have equal financial benefits. I speculate that student loan debt could impact who chooses to pursue and remain in the helping professions.

Increasingly, repaying student loan debt is becoming a family problem (Krabbe, 2020). More research is showing that repaying loans is impacting future family formation. Borrowers are reporting delaying starting their own families (Nau et al., 2015) and young couples are reporting that loan payments are straining their relationship—especially if one partner has loans and the other does not (Stivers & Berman, 2020). Families are driving forces in education and career choices (Stivers & Berman, 2020), but

repaying student loans is still seen as an individuals' responsibility. My role as a future higher education educator, will be to understand the lasting impact of repaying student loans for individual students, and also the continued role family financial socialization has on student career choices. Along with financial education, current students and parents may benefit from career counseling that reflects the long-term reality of repaying student loans.

More research is needed to examine the long-term outcomes of borrowers and if there are continued inequalities surrounding meaningful work and long-term financial security. To better understand the lived experience of FGCS, I would like to conduct a qualitative study to inquire more in depth about their repayment experience. Exploratory questions would ask how they chose their career, if their current job matches their college major, if their current job offers financial security, and would they make the same choices again. In the context of repaying student loans, are FGCS able to pursue meaningful careers? Also, as part of the enactment of the Coronavirus Aid, Relief and Economic Security (CARES) Act, most student loan borrowers were rolled into forbearance (Haughwout et al., 2020; Weiss, 2021). It is possible that having a pause on their student loan payments provided some borrowers an opportunity to regain financial stability. I would like to conduct a study that examines if and whom were financially able to continue repaying their student loans. I speculate that those with higher incomes would have been able to continue making their student loan payments, thus decreasing their overall debt burden quicker. On the other hand, borrowers who were financially struggling or had lower incomes, may not have been able to continue making payments. Thus, the pause in student loan benefits may have different outcomes depending on the

income and career of the borrower. These two proposed studies would contribute to our understanding of the role of student loan debt, meaningful career outcomes, and the long-term impact of economic volatility on borrowers' experiences.

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Appendix

Table 1

Study 1: Demographic Characteristic Comparisons Between Those Who Did and Those Who Did Not Answer the Open-ended Question About Student Loan Advice for Those Who Took Out a Student Loan

	Answered question (n = 282)	Did not answer question (n = 91)		
	n (%) or M (SD)	n (%) or M (SD)	χ^2 or T	p
Demographic Characteristics				
Gender[a]			0.861	.354
Male	105 (37.2%)	29 (31.9%)		
Female	177 (62.8%)	62 (68.1%)		
Race/Ethnicity[a]			4.781	.572
White/Caucasian	166 (58.9%)	59 (64.8%)		
Hispanic/Latino	62 (22.0%)	21 (23.1%)		
Asian/Asian American	22 (7.1%)	6 (6.6%)		
African American/Black	17 (6.0%)	1 (1.1%)		
Other	8 (2.8%)	2 (2.2%)		
Native American	7 (2.5%)	1 (1.1%)		
Pacific Islander	2 (0.7%)	1 (1.1%)		
First-generation Status[a]			.085	.771
First-generation	64 (22.7%)	22 (24.2%)		
Not First-generation	218 (77.3%)	69 (75.8%)		
Family Income[a]			.417	.703
Less than $50,000	68 (24.3%	23 (25.6%)		
$50,000-$99,000	104 (37.1%)	28 (31.1%)		
$100,000-$200,000	87 (31.1%)	34 (37.8%)		
Over $200,000	21 (7.5%)	5 (5.6%)		
Income[b]	2.80 (1.33)	3.10 (1.31)	1.89	.060
Less than $24,999	55 (19.5%)	11 (12.1%)		
Between $25,000-$39,999	73 (25.9%)	21 (23.1%)		
Between $40,000-$59,999	71 (25.2%)	26 (28.6%)		
Between $60,000-$74,999	40 (14.2%)	14 (15.4%)		
More than $74,999	43 (15.2%)	19 (20.9%)		

[a]Chi-square analyses were computed to examine differences by answering open-ended question. [b]*T*-tests were computed to examine mean differences by answering open-ended question.

Table 2

Study 1: Themes, Subthemes, and Quotes from Young Adults Giving School Loan Advice (N=282)

Themes	Quotes
Plan Ahead (*n* =207) 1) Limit the amount borrowed & calculate the real costs 2) Be frugal, live on a budget, & save money 3) You are responsible to pay back 4) Look for payment options 5) Do loan research, know the details, & repayment options 6) Seek advice & support from others 7) Find Scholarships	*"Take a realistic amount, you have to pay it back. Apply for as many scholarships possible to take a lesser amount."* *"Remember that you have to pay it back later, Don't take more than you can handle, create a budget for the start for expenses, savings, and paying off loan"* *"Truly understand what it means to take out loans before making that significant commitment."* *"People tease the younger generations for being irresponsible, selfish and "unique snowflakes." I think the best way to debunk that--whether myth or truth--is to take full responsibility for your first real adult endeavor: college."*
Making decisions based on future outcomes (*n* =113) 1) Choose major based on future career, income, or dreams 2) Don't be pressured into college & think about why college 3) Loans can delay future goals	*"Consider why you're going to college and if this is the right time. It is a serious investment that will follow you for many years. Be ready to be dedicated to the curriculum before you sign up."* *"Think about the career you want, then pick the degree program that will get you there. Don't pick a major without considering what you plan to do with it first. I have seen too many people with degrees in anthropology working as restaurant servers, trying to pay off their loans on less than minimum wage."*
Look for Alternatives to University (*n* =62) 1) Go to Community College first or a cheaper school 2) Transfer to University later 3) Go into the military or get a job instead of going to school	*"Go to community college for first 2 years. If you can't afford to pay for 4 years, pay for 2. University costs are a joke and students are forced into debt for no reason."* *"I would make sure the career path is one they absolutely want to follow. Community college courses or a year off between starting college are a great way to explore your career interests and really cement what you want to study."* *"Make sure you pick a major where you can get decent employment and pay off the loans or have them forgiven"*

Repaying Loans (*n* =98) 1) Start paying while in college 2) Pay more than the minimum 3) Work to make payments while in college & sacrifice now 4) Pay regularly & as early as possible	*"Try to put the difference toward paying off your loan quickly and before you make lifestyle changes."* *"Work throughout college to save up to make payments when you graduate."* *"If you can, pay tie interest while in college for I subsidized loans, and do not get forbearance when paying back your loan unless it is a last resort!"*
Social Comparison & Character Statements (*n* =37) 1) Work harder, don't use loans to support a certain lifestyle 2) Loan debt leads to negative peer comparisons 3) Loans can lead to more independence	*"Students need to understand what it means to pay interest, and just how much they could be paying per month for loans. Many of my peers regret the college choices they've made because of the debt they've accumulated. They really had no idea what they were getting into."* *"Try harder for a scholarship, and if you don't want to try hard, just know eventually it will be a requirement if you expect to be debt-free."* *"DONT DO IT! Even though my college experience was so incredible, with the debt I am in I would recommend going to a junior college first or only going to a school you can find a scholarship for. This debt hinders me from being independent, from my opportunity to save for my future, and makes it difficult for me to pay other bills on time as well. Not to mention I'm extremely stressed. My friends that didn't take out loans are currently buying a house, getting a married, and have had the opportunity to travel. I'm nowhere close to that opportunity."* *"Recognize that a student loan can be an investment. Do your research on loan repayment, have a plan, and receive the education that will make you confident in the world as a person."*

Table 3

Study 1: Valence Categories Coding Protocol for Adults Giving School Loan Advice

Reference number	**1**	**2**	**3**
1 : 0-Negative Support			
2 : Avoid Completely-Do Not Use Loans			
3 : Loans are a Burden			
4 : Be Careful-Be wary of using loans			
5 : Education is too expensive and Not worth it			
6 : Use only if you must (no other option)-Last resort			
7 : Regret using loans			
8 : Unfortunate			
9 : 1-Neutral position	1	1	1
10 : Be realistic about using loans and amount borrowed			
11 : Do your research on loans			
12 : If you need to, then use them for education			
13 : Keep in mind that you need to repay			
14 : No opinion			
15 : Try not to but it is ok if you do			
16 : 2-Positive Support			
17 : Loans can give additional drive into school success			
18 : Don't be scared-It's normal to use loans			
19 : Education is good and worth it to use loans			
20 : If only option, then use loans and take the minimum amount			
21 : Pursue your dreams and use loans			
22 : Repayment options exist so use loans			
23 : Things will work out so it’s ok to use loans			

Table 4

Study 1: Examples for each of the Three Valence Categories for Loan Advice (N=282)

Themes	Quotes
Negative (*n* =70) *"Don't do it"*	*"Do not take out loans. Go to a community college to get basic credits and save money."* *"Stay away if you can. Learn skills you need once employed."* *"Paying student loan debt long into your adult life can have a big impact; it may delay your ability to purchase a car, a home, or even start a family. If you are considering attending an expensive university, take some time to reflect on whether that education and experience will be worthwhile in the long run."* *"Don't take them out if you don't have to. I accrued most of my debt despite being on a good scholarship. Get a job. If you can't afford the student loans then you should go to a different school."* *"It's not worth it in this economy/job market unless you are getting a degree with a direct path to employment that pays well (i.e. engineering)."*
Positive (*n* =61) *"Don't be scared to take out a loan."*	*"Taking out student loans puts additional drive into school success, from my experience, than people who had their expenses paid by parents on their behalf."* *"Take out the loans you need. Work hard in college, and the amount will be irrelevant. I took out my loans knowing that the education will set me up to pay these back."* *"Its still worth all the money to chose where you want to go to college."* *"Education is worth it, but try to work with your local and state governments to prove how important education is so that they make it more affordable. I do not regret taking out student loans for my education but the debt can be stifling at times."* *"Don't let finances stop you from attending college. Student loans can be a burden, but there are many repayment options, and it's an avenue worth exploring if it means you can attend college."*
Neutral (*n* =151) *"To not take out more than what you need, otherwise it is overwhelming later."*	*"Stay focused to get through college as quickly as possibly so to not spend more money and start off in more debt. Also work up get as many job experience and internships as possible to be qualified right away for your future career to start paying off your debt."* *"Go to a community college for the first two years. Don't get out more loans than you need."* *"Take as little as possible. Make sure you can repay with the career you have in mind."* *"Think hard about what it really means to take out a loan. Make a hypothetical budget with realistic numbers to see if it is worth it to you"* *"Really push to get scholarships, but if student loans are your only option know every detail of your loan and understand the amount you will need to pay off after graduating from college."*

Table 5

Study 1: Descriptive Statistics and Correlations of Variables (N=282)

	M	SD	Valence	PA	FO	AU	RL	SC	Gen	FGCS	FI	CI	AA	AS	PI	HIS	NA	WH	OT	FT	PT
Valence	.97	.68	1																		
PA	.74	.44	.173**	1																	
FO	.40	.49	-.057	.077	1																
AU	.22	.42	-.252**	-.073	.108	1															
RL	.35	.48	.187**	.046	.026	.008	1														
SC	.13	.34	-.013	.017	.068	.073	.047	1													
Gen	1.63	.48	.039	.174**	-.149*	-.016	.115	-.113	1												
FGCS	.23	.42	-.087	-.004	.023	-.063	-.058	-.035	-.020	1											
FI	2.22	.90	.085	-.080	.055	.043	.166**	.058	-.026	-.283**	1										
CI	2.80	1.33	.146*	-.006	.098	-.055	.162**	.107	-.262**	-.020	.201**	1									
AA	.06	.24	.012	.049	-.055	-.098	.003	-.098	.103	.041	.001	-.119*	1								
AS	.07	.26	-.007	-.024	.028	.020	-.028	-.026	.013	-.150*	.075	.011	-.070	1							
PI	.01	.08	.066	-.046	.017	.057	.027	-.033	-.022	.055	.068	-.083	-.021	-.023	1						
HIS	.22	.41	.037	-.073	-.155**	.008	.008	-.054	-.105	.121*	-.088	.036	-.134*	-.147*	-.045	1					
NA	.02	.16	-.059	.043	-.084	-.030	-.069	-.062	.076	.022	-.020	-.096	-.040	-.044	-.013	-.085	1				
WH	.59	.49	-.029	.058	.184**	.026	.005	.133*	-.018	-.046	.007	.068	-.303**	-.331**	-.101	-.635**	-.191**	1			
OT	.03	.17	.008	-.044	-.053	.012	.055	-.003	.087	-.042	.061	-.006	-.043	-.047	-.014	-.091	-.027	-.204	1		
FT	.78	.41	.102	-.039	.008	.029	.130*	.051	-.066	.120*	-.100	.460**	.025	-.023	-.058	-.033	-.027	.086	-.118*	1	
PT	.06	.24	-.009	.057	-.095	-.034	-.069	-.101	.201**	-.072	-.065	-.289**	-.066	.041	-.022	.001	-.042	-.018	.130*	-.497**	1

Note. $* \rho < .05$. $** \rho < .01$. Point-biserial correlations conducted for dichotomous variables. PA=Plan Ahead; FO=Future Outcomes; AU=Alternative University; RL=Repay Loans; SC=Social Comparisons; Gen=Gender; FGCS=First-generation college student; FI=Family Income; CI=Current Income; AA=African American/Black; AS=Asian; PI=Pacific Islands; HIS=Hispanic/Latino; NA=Native American; WH=White; OT=Other; FT=Full-time employment; PT=Part-time employment.

Table 6

Study 1: Ordinal Logistic Results With Valence as Dependent Variable (N=282)

Predictor	*B*	*SE*	*Wald*	*p*	*exp(B)*
Negative Valence (ref. Positive Valence)	-1.116	.742	2.265	.132	.328
Neutral Valence (ref. Positive Valence)	1.741	.746	5.454	.020	5.703
Plan Ahead	-.852	.288	8.774	.003	.427
Future Outcomes	.324	.257	1.594	.207	1.383
Alternative to University	1.360	.309	19.351	.000	3.898
Repay Loans	-.693	.268	6.682	.010	.500
Social Comparisons	.028	.364	.006	.939	1.028
Female	-.027	.272	.010	.921	.973
Race/ Ethnicity (reference group White)					
Hispanic/Latino	.333	.317	1.103	.294	1.395
Asian/Asian American	.068	.481	.020	.888	1.070
African American/Black	-.070	.534	.017	.896	.932
Other	.264	.738	.128	.721	1.302
Native American	-.582	.792	.539	.463	.559
Pacific Islander	3.071	1.670	3.381	.066	21.561
First-Generation Student	.667	.315	4.479	.034	1.948
Family Income (reference group Over $200,000)					
Less than $50,000	-.442	.537	.677	.411	.643
$50,000-$99,000	-.756	.502	2.266	.132	.470
$100,000-$200,000	-.498	.503	.980	.322	.608
Current Income (reference group More than $74,999)					
Less than $24,999	-.146	.517	.080	.777	.864
Between $25,000-$39,999	-.835	.416	4.032	.045	.434
Between $40,000-$59,999	-.138	.403	.117	.732	.871
Between $60,000-$74,999	-.314	.445	.498	.480	.730
Employed Full-Time	-.761	.398	3.669	.055	.467

Notes. All variables have degrees of freedom=1. Pseudo R^2 = .221.

Table 7

Study 1: Logistic Regression Results With Negative Valence as Dependent Variable (N=70)

Predictor	*B*	*SE*	*Wald*	*df*	*p*	*exp(B)*
Plan Ahead	-.765	.320	5.696	1	.017	.466
Alternative to University	1.222	.330	13.707	1	.000	3.393
Repay Loans	-.714	.347	4.244	1	.039	.490
First-Generation Student	.720	.337	4.565	1	.033	2.054
Model Test		χ^2	*df*	*p*		
Overall model evaluation		40.576	5	.000		
Goodness-of-fit test						
Hosmer & Lemeshow		5.962	8	.652		

Note. Cox and Snell R^2 = .134. Nagelkerke R^2 = .199.

Table 8

Study 1: Logistic Regression Results With Neutral Valence as Dependent Variable (N=151)

Predictor	*B*	*SE*	*Wald*	*df*	*p*	*exp(B)*
Plan Ahead	.186	.276	.453	1	.501	1.204
Alternative to University	-.249	.294	.717	1	.297	.780
Repay Loans	-.030	.259	.013	1	.908	.970
First-Generation Student	-.441	.291	2.307	1	.129	.643
Model Test		χ^2	*df*	*p*		
Overall model evaluation		9.202	5	.101		
Goodness-of-fit test						
Hosmer & Lemeshow		9.699	8	.287		

Note. Cox and Snell R^2 = .032. Nagelkerke R^2 = .043.

Table 9

Study 1: Logistic Regression Results With Positive Valence as Dependent Variable (N=61)

Predictor	*B*	*SE*	*Wald*	*df*	*p*	*exp(B)*
Plan Ahead	.684	.385	3.149	1	.076	1.981
Alternative to University	-1.382	.499	7.675	1	.006	.251
Repay Loans	.716	.307	5.420	1	.020	2.046
First-Generation Student	-.121	.363	.110	1	.740	.886
Model Test		χ^2	*df*	*p*		
Overall model evaluation		19.458	5	.002		
Goodness-of-fit test						
Hosmer & Lemeshow		16.645	7	.020		

Note. Cox and Snell R^2 = .067. Nagelkerke R^2 = .103.

Table 10

Study 1: Demographic Characteristic Comparisons Between First-generation College Students and Non First-generation College Students

	First-generation Students (n = 64)	Non First-generation Students (n = 218)		
	n (%) or M (SD)	n (%) or M (SD)	χ^2 or T	p
Demographic Characteristics				
Gender[a]			0.118	.731
Male	25 (39.1%)	80 (36.7%)		
Female	39 (60.9%)	138 (63.3%)		
Race/Ethnicity[a]			11.258	.081
White/Caucasian	35 (54.7%)	131 (60.1%)		
Hispanic/Latino	20 (31.3%)	42 (19.3%)		
Asian/Asian American	0 (0%)	20 (9.2%)		
African American/Black	5 (7.8%)	12 (5.5%)		
Other	1 (1.6%)	7 (3.2%)		
Native American	2 (3.1%)	5 (2.3%)		
Pacific Islander	1 (1.6%)	1 (0.5%)		
Family Income[b]	1.74 (0.81)	2.35 (0.88)	4.914	.000
Less than $50,000	28 (45.2%)	40 (18.3%)		
$50,000-$99,000	24 (38.7%)	80 (36.7%)		
$100,000-$200,000	8 (12.9%)	79 (36.2%)		
Over $200,000	2 (3.2%)	19 (8.7%)		
Income[b]	2.75 (1.26)	2.81 (1.35)	0.328	.743
Less than $24,999	9 (14.1%)	46 (21.1%)		
Between $25,000-$39,999	23 (35.9%)	1.7		
Between $40,000-$59,999	17 (26.6%)	54 (24.8%)		
Between $60,000-$74,999	5 (7.8%)	35 (16.1%)		
More than $74,999	10 (15.6%)	33 (15.1%)		
Average undergraduate student loan amount[b]	$25,327.59 ($17,610.19)	$28,607.73 ($23,842.06)	0.971	.332

[a]Chi-square analyses were computed to examine differences by first-generation status. [b]*T*-tests were computed to examine mean differences by first-generation status.

Table 11

Study 2: T-tests, Means, and Standard Deviations by Group

	Loans Paid (n = 96)	In repayment (n = 227)		
	n (%) or *M* (*SD*)	*n* (%) or *M* (*SD*)	*T*	*p*
Meaning in Life	4.95 (1.34)	4.91 (1.33)	.258	.797
Missing	1 (0.01%)	0 (0.0%)		
Self-esteem	3.82 (.87)	3.62 (.74)	2.118	.035
Missing	0 (0.0%)	0 (0.0%)		
Financial Self-efficacy	3.66 (.90)	3.45 (.96)	1.785	.075
Missing	1 (0.01%)	0 (0.0%)		
Job Satisfaction	3.88 (.94)	3.72 (1.00)	1.329	.185
Missing	0 (0.0%)	0 (0.0%)		
Financial Satisfaction	3.50 (1.01)	3.00 (1.03)	4.033	.000
Missing	0 (0.0%)	0 (0.0%)		
Life Satisfaction	3.66 (.99)	3.37 (.91)	2.495	.013
Missing	0 (0.0%)	0 (0.0%)		

Table 12

Study 2: Demographic Characteristic Comparisons Between Those Who Reported Their Loans Were Paid Off And Those Still In Repayment

	Loans Paid (n = 96)	In Repayment (n = 227)		
	n (%) or M (SD)	n (%) or M (SD)	χ^2	p
Demographic Characteristics				
Gender[a]			0.170	.680
Male	37 (38.5%)	82 (36.1%)		
Female	59 (61.5%)	145 (63.9%)		
Missing	0 (0.0%)	0 (0.0%)		
Race/Ethnicity[a]			9.729	.137
White/Caucasian	64 (66.7%)	140 (61.7%)		
Hispanic/Latino	16 (16.7%)	48 (21.1%)		
Asian/Asian American	12 (12.5%)	13 (5.7%)		
African American/Black	1 (1.0%)	11 (4.8%)		
Other	2 (2.1%)	6 (2.6%)		
Native American	1 (1.0%)	6 (2.6%)		
Pacific Islander	0 (0.0%)	3 (1.3%)		
Missing	0 (0.0%)	0 (0.0%)		
First Generation Status[a]			7.560	.006
First Generation	12 (12.5%)	60 (26.4%)		
Not First Generation	84 (87.5%)	167 (73.6%)		
Missing	0 (0.0%)	0 (0.0%)		
Family Income[a]			4.897	.180
Less than $50,000	19 (19.8%)	49 (21.9%)		
$50,000-$99,000	32 (33.3%)	87 (38.8%)		
$100,000-$200,000	34 (35.4%)	77 (34.4%)		
Over $200,000	11 (11.5%)	11 (4.9%)		
Missing	0 (0.0%)	3 (0.1%)		
Income[a]	3.23 (1.31)	2.92 (1.27)	9.710	.046
Less than $24,999	11 (11.5%)	31 (13.7%)		
Between $25,000-$39,999	16 (16.7%)	64 (28.2%)		
Between $40,000-$59,999	33 (34.4%)	59 (26.0%)		
Between $60,000-$74,999	12 (12.5%)	38 (16.7%)		
More than $74,999	24 (25.0%)	35 (15.4%)		
Missing	0 (0.0%)	0 (0.0%)		
Work Status[a]			3.477	.627
Full-time	77 (80.2%)	190 (83.7%)		
Part-time	5 (5.2%)	12 (5.3%)		
Part-time, looking for full	4 (4.2%)	6 (2.6%)		
Self-employed	6 (6.3%)	8 (3.5%)		
Unemployed, looking	1 (1.0%)	7 (3.1%)		
Unemployed, not looking	3 (3.1%)	4 (1.8%)		
Missing	0 (0.0%)	0 (0.0%)		

[a]Chi-square analyses were computed to examine differences by loan repayment status.

Table 13

Study 2: Bivariate Correlations of Latent Constructs for Loans Paid Group (n=96) and Loans in Repayment Group (n=227)

	Meaning in Life	Self-esteem	Financial Self-efficacy	Life Satisfaction	Job Satisfaction	Financial Satisfaction
Meaning in Life (1-7)	-	.580**	.205**	.555**	.484**	.221**
Self-esteem (1-5)	.575**	-	.413**	.757**	.556**	.470**
Financial Self-efficacy (1-5)	.287**	.331**	-	.385**	.307**	.590**
Life Satisfaction (1-5)	.658**	.857**	.287**	-	.618**	.566**
Job Satisfaction (1-5)	.317**	.476**	.330**	.546**	-	.457**
Financial Satisfaction (1-5)	.332**	.582**	.517**	.580**	.536**	-

Note. Loans paid group (*n*=96) below the diagonal; In Repayment group (*n*=227) above the diagonal. $* \rho < .05$. $** \rho < .01$.

Table 14

Study 2: Summary of Multigroup CFA Goodness-of-Fit Model Fit Indices for Loans Paid Group (n=96) and In Repayment Group (n=227)

Model	χ^2	df	CFI	RMSEA	SRMR
Initial CFA Model (No Constraints)	730.33***	430	0.928	0.066	0.060
Modification 1 (EST3 WITH EST1, Repayment Group)	708.79***	429	0.933	0.064	0.060
Modification 2 (PM3 WITH PM2, Repayment Group)	693.76***	428	0.936	0.062	0.060
Modification 3 (FSAT3 WITH FSAT2, Loans Paid Group)	671.66***	427	0.941	0.060	0.060
Modification 4 (PM4 WITH PM1, Loans Paid Group)	666.215***	426	0.942	0.059	0.060

Note. CFA= Confirmatory Factor Analysis; df=Degrees of Freedom; CFI=Comparative Fit Index; SRMR=Standardized Root Mean Square Residual; and RMSEA=Root Mean Square Residual. ***$p < .000$.

Table 15

Study 2: Standardized and Unstandardized Coefficients for Final Multigroup CFA Model and Scale Reliability for Loans Paid Group (n=96) and In Repayment Group (n=227)

Construct/Indicator	β		*B*		(α)
	Loans Paid	In Repayment	Loans Paid	In Repayment	
Meaning in Life					.900
I understand my life's meaning.	.824 (.048)	.805 (.046)	1.237 (.139)	1.248 (.094)	
My life has a clear sense of purpose.	.936 (.022)	.845 (.039)	1.448 (.101)	1.298 (.086)	
I have a good sense of what makes my life meaningful.	.901 (.026)	.728 (.056)	1.331 (.118)	.997 (.109)	
I have discovered a satisfying life purpose.	.857 (.042)	.923 (.020)	1.305 (.136)	1.468 (.073)	
My life has no clear purpose. (Reversed)	.574 (.084)	.681 (.061)	1.000 (.177)	1.208 (.121)	
Life Satisfaction					.913
In most ways, my life is close to my ideal.	.864 (.034)	.889 (.018)	.921 (.096)	.905 (.048)	
The conditions of my life are excellent.	.816 (.041)	.844 (.031)	.816 (.086)	.778 (.051)	
I am satisfied with my life.	.902 (.030)	.884 (.020)	1.006 (.092)	.870 (.047)	
So far I have gotten the important things I want in life.	.864 (.036)	.772 (.035)	1.028 (.101)	.827 (.062)	
If I could live my life over, I would change almost nothing.	.746 (.056)	.719 (.035)	0.926 (.100)	.905 (.062)	
Job Satisfaction					.790
Current employment situation?	.894 (.054)	.838 (.037)	1.088 (.104)	1.022 (.064)	
Future employment prospects?	.533 (.100)	.792 (.040)	.594 (.125)	.863 (.072)	
Current work/life balance?	.572 (.093)	.708 (.047)	.667 (.133)	.831 (.072)	
Financial Satisfaction					.806
I am satisfied with my current financial status	.892 (.060)	.849 (.028)	1.106 (.107)	1.023 (.054)	
I have difficulty paying for things. (Reversed)	.571 (.088)	.840 (.034)	.587 (.104)	1.012 (.063)	
I am constantly worried about money. (Reversed)	.555 (.075)	.595 (.055)	.751 (.115)	.723 (.075)	
Self-esteem					.840
… feel sure of who you are (what kind of person you are).	.651 (.104)	.560 (.062)	.712 (.128)	.511 (.071)	
… feel good about yourself?	.887 (.032)	.766 (.044)	.927 (.091)	.751 (.060)	
… feel very satisfied with your life the way it is?	.713 (.057)	.625 (.050)	.577 (.084)	.541 (.058)	
… feel satisfied with yourself the way you are?	.900 (.025)	.850 (.028)	1.006 (.080)	.771 (.050)	
Financial self-efficacy					.775
I am satisfied with the way I pay my bills.	.539 (.112)	.776 (.045)	.493 (.124)	.851 (.075)	
I feel good about my money management abilities.	.964 (.060)	.878 (.028)	1.098 (.095)	.988 (.058)	
Sometimes I don't like the way I manage my finances.(Reversed)	.635 (.095)	.630 (.066)	.804 (.131)	.745 (.085)	

Note. Standard Error are in parentheses. All loadings statistically significant (p<.001). CFA=Confirmatory Factor Analysis. β=Standardized Coefficients for CFA. *B*=Unstandardized Coefficients. α=Scale Reliability. Standard error is in parentheses. Final model fit was χ^2 (426) = 666.21, p < 0.000, CFI = 0.94, RMSEA = 0.05, SRMR = 0.06.

Table 16

Study 2: Multigroup SEM Constrained Reduced Model Results, Standardized Direct Associations and Standard Errors for Loans Paid Group (n=96) and In Repayment Group (n=227) for Hypothesis 1

	β		SE	
Model	Loans Paid	In Repayment	Loans Paid	In Repayment
Meaning in Life →				
Life Satisfaction+	.689***	.593***	.055	.070
Job Satisfaction+	.380***	.543***	.106	.063
Financial Satisfaction+	.310**	.200*	.109	.079

Note. Final model fit was χ^2 (244) = 346.35, $p < 0.000$, CFI = 0.97, RMSEA = 0.05, SRMR = 0.06. +indicates non-constrained parameter. β=Standardized Coefficients. SE=Standard error. *$p < .05$. **$p < .01$. ***$p < .001$. Two control variables were included in the model: family income and participants' current income.

Table 17

Study 2: Multigroup SEM Constrained Model Results, Standardized Direct Associations and Standard Errors for Loans Paid Group (n=96) and In Repayment Group (n=227) for Hypothesis 2

	β		SE	
Model	Loans Paid	In Repayment	Loans Paid	In Repayment
Meaning in Life →				
Self-esteem	.462***	.510***	.057	1.248
Financial Self-efficacy	.215***	.175***	.037	1.298
Life Satisfaction+	.159*	.110	.072	.068
Job Satisfaction+	-.041	.220**	.124	.081
Financial Satisfaction+	-.187	-.180*	.116	.087
Self-esteem →				
Life Satisfaction	.846***	.813***	.059	.055
Job Satisfaction	.593***	.452***	.103	.084
Financial Satisfaction	.694***	.602***	.102	.077
Financial Self-efficacy →				
Life Satisfaction	.017	.023	.011	.015
Job Satisfaction	.087***	.090***	.024	.022
Financial Satisfaction	.137***	.161***	.024	.027

Note. Final model fit was χ^2 (635) = 1016.59, $p < 0.000$, CFI = 0.92, RMSEA = 0.06, SRMR = 0.07. +indicates non-constrained parameter. β=Standardized Coefficients. SE=Standard error. *$p < .05$. **$p < .01$. ***$p < .001$. Four control variables were included in the model: family income, participants' current income, baseline self-esteem, baseline financial self-efficacy.

Figure 1

Study 1: Flowchart of Convergent Parallel Mixed Methods Design

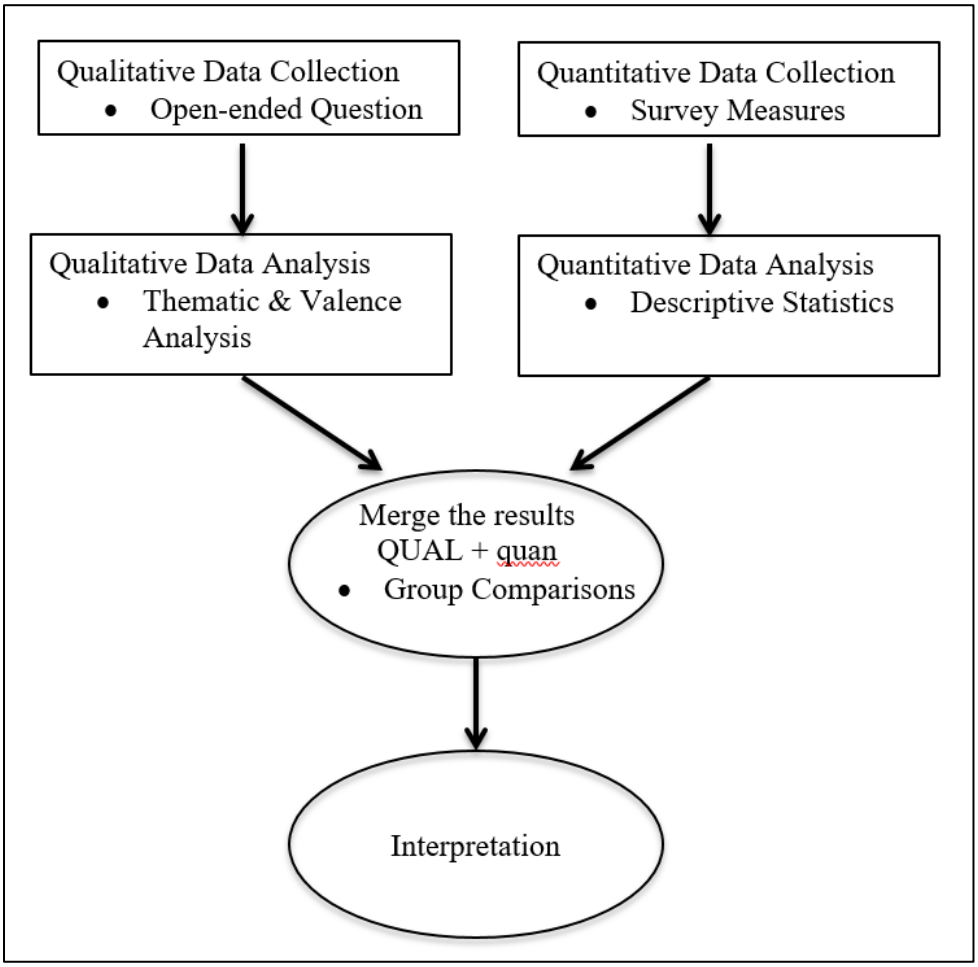


Figure 2

Study 1: Example Journal Style Memo of Qualitative Coding Process

3.28.17

202-302 coded

Although the question is about advice about loans, many of the responses seem to debating whether a college education is worth the cost of loans/worth burden/worth the impact to their future.

Discussion:

Are loans the main avenue towards/to get an education in the US? Is it viewed that in order to have a future, to have options, they need a degree, which means they have to take on debt in order to have a future/any chance of success?

Dejected & Resigned, yet not looking for hand outs

Going to college is a way to be independent and self-reliant

But not if you can't pay your bills because of loans, or they have the same jobs as those without degrees

More about warning…plan ahead…don't just do it to do it, be intentional

Hard mandate to give to 18 year olds…know what you want to do and how you want to live the rest of your life

Competing demands

Is it hopeless?

Can this age group see the long-term benefits yet? They are living with the negative consequences of debt, but have not experienced the positive yet…but all research still points to the value and benefit of college…income, job, health, etc.

Also…not just questioning the value of loans or education…they are also questioning the worth of different schools. As in, the value offered by institutions. If community college, state school, and prestigious university all get you the same job, then don't pay more, because the roi isn't worth it…future burden of debt. So how do colleges market themselves? What seems to be important is the type of job and income that you get from the degree, rather than the learning experience or prestige about the school. A few mention that a good school can help you get better jobs, but that is not the overarching tone.

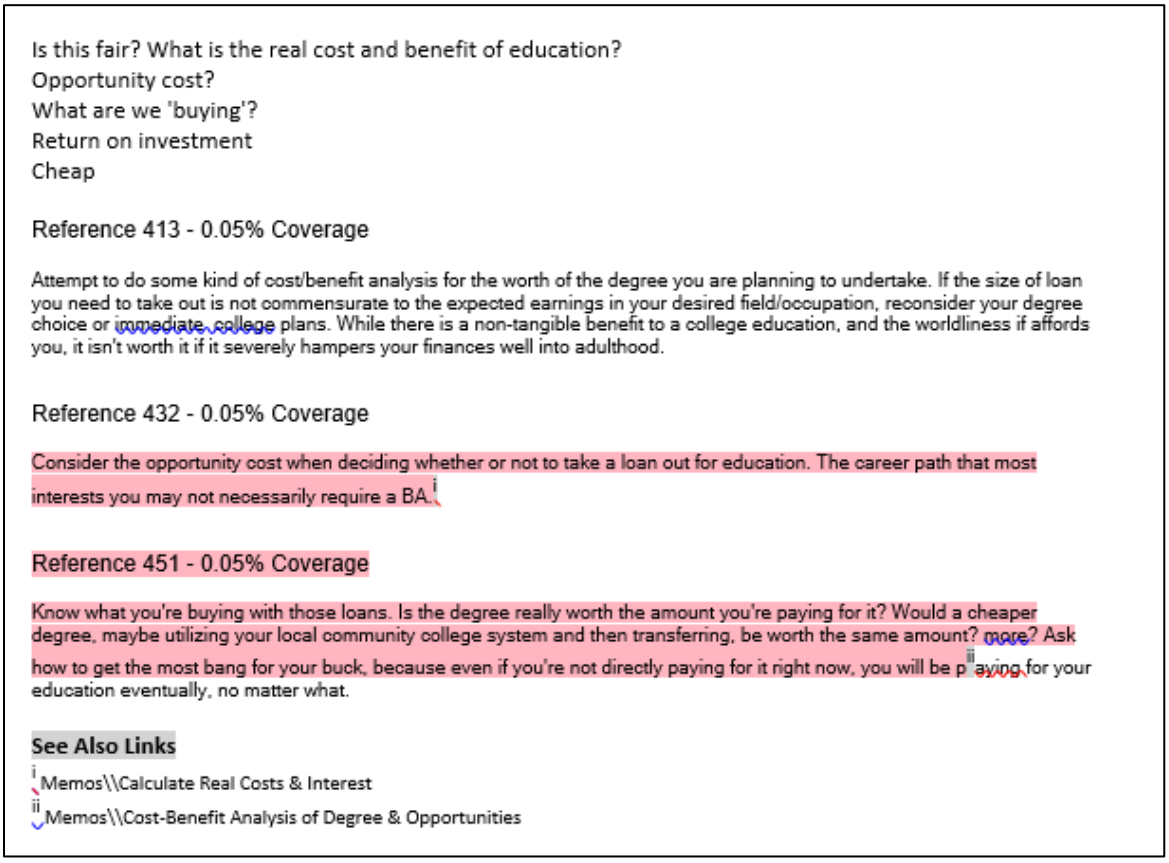
How many talk about the economy? Current job market? Is this the same thing as connection to career and income?

We haven't tracked internships.

Seems to be a theme that go cheaper for BA and then more loans/prestige for grad school

Figure 3

Study 1: Example of Exported NVivo Memo of Qualitative Coding Process



Is this fair? What is the real cost and benefit of education?
Opportunity cost?
What are we 'buying'?
Return on investment
Cheap

Reference 413 - 0.05% Coverage

Attempt to do some kind of cost/benefit analysis for the worth of the degree you are planning to undertake. If the size of loan you need to take out is not commensurate to the expected earnings in your desired field/occupation, reconsider your degree choice or immediate college plans. While there is a non-tangible benefit to a college education, and the worldliness if affords you, it isn't worth it if it severely hampers your finances well into adulthood.

Reference 432 - 0.05% Coverage

Consider the opportunity cost when deciding whether or not to take a loan out for education. The career path that most interests you may not necessarily require a BA.[i]

Reference 451 - 0.05% Coverage

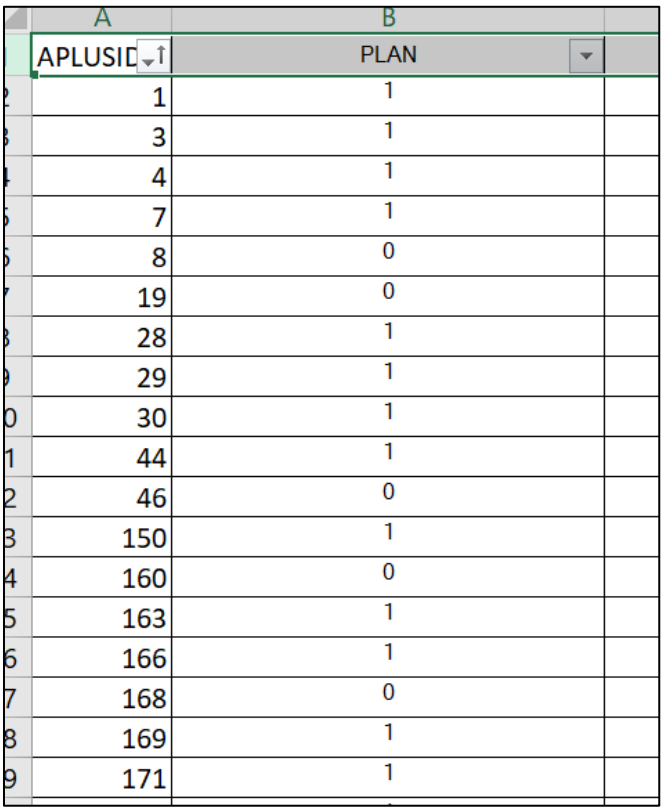
Know what you're buying with those loans. Is the degree really worth the amount you're paying for it? Would a cheaper degree, maybe utilizing your local community college system and then transferring, be worth the same amount? more? Ask how to get the most bang for your buck, because even if you're not directly paying for it right now, you will be p[ii]aying for your education eventually, no matter what.

See Also Links

[i] Memos\\Calculate Real Costs & Interest
[ii] Memos\\Cost-Benefit Analysis of Degree & Opportunities

Figure 4

Study 1: Screenshot of Excel Qualitative Coding of One Theme (Plan) Imported into SPSS to Create a Dichotomous Variable



	A	B
	APLUSID	PLAN
2	1	1
3	3	1
4	4	1
5	7	1
6	8	0
7	19	0
8	28	1
9	29	1
10	30	1
11	44	1
12	46	0
13	150	1
14	160	0
15	163	1
16	166	1
17	168	0
18	169	1
19	171	1

Figure 5

Study 2: Conceptual Model Linking Meaning in Life with Satisfaction Through Self-esteem and Self-efficacy

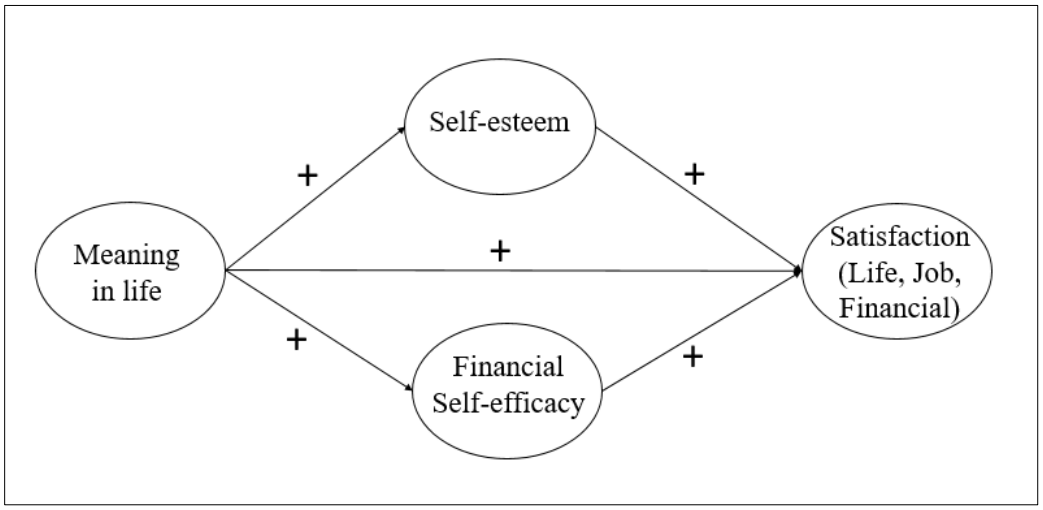
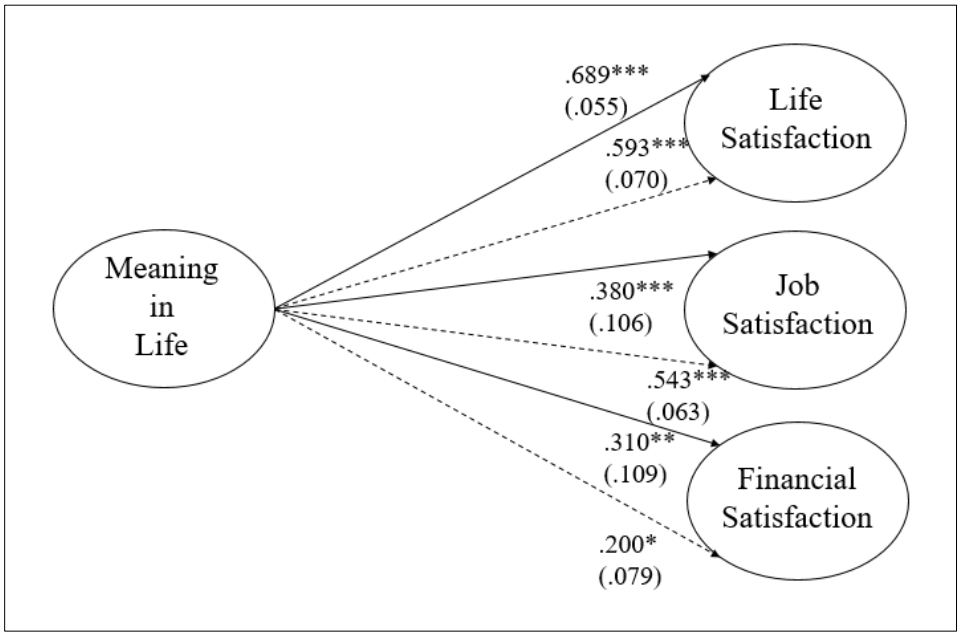


Figure 6

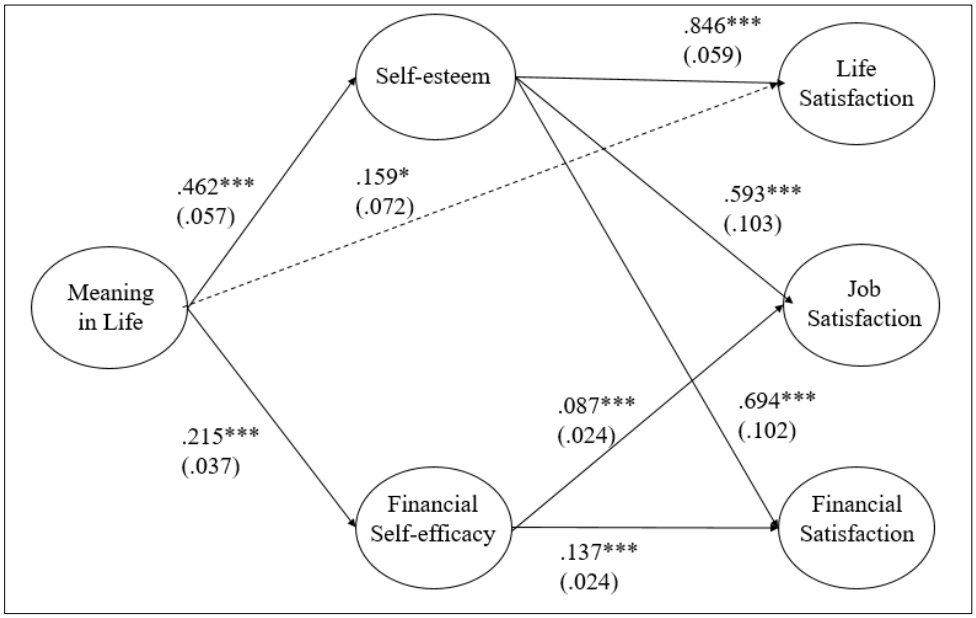
Study 2: Reduced Model Standardized and Significant Pathways for Loans Paid Group (n=96) and Loans In Repayment Group (n=227)



Note. All three direct pathways were non-constrained. Solid line indicates Loans Paid group and dash line indicates Loans in Repayment group. *$p < .05$. **$p < .01$. ***$p < .001$. Two control variables were included in the model: family income and participants' current income.

Figure 7

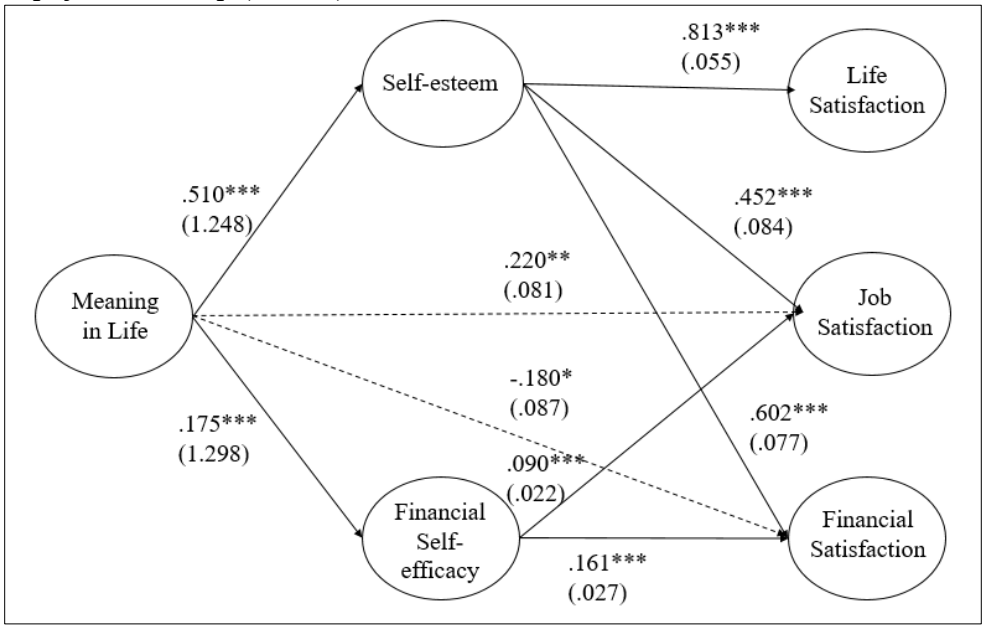
Study 2: Full SEM Model Standardized and Significant Pathways for Loans Paid Group (n=96)



Note. All pathways were tested, though only significant paths are shown. Dash lines indicate non-constrained pathways. *$p < .05$. **$p < .01$. ***$p < .001$. Four control variables were included in the model: family income, participants' current income, baseline self-esteem, baseline financial self-efficacy.

Figure 8

Study 2: Full SEM Model Standardized and Significant Pathways for Loans In Repayment Group (n=227)



Note. All pathways were tested, though only significant paths are shown. Dash lines indicate non-constrained pathways. *$p < .05$. **$p < .01$. ***$p < .001$. Four control variables were included in the model: family income, participants' current income, baseline self-esteem, baseline financial self-efficacy.

Supplemental Material Appendix

Testing Assumptions for Structural Equation Modeling

Data analyses were conducted to determine the appropriateness of testing the conceptual model using Structural Equation Model (SEM). Results from the preliminary analyses tests confirm that the data meet the assumptions of SEM.

Measure Validity Screening

Each continuous multi-item measure met Cronbach's alpha reliability for internal consistency (see measures descriptions). The reliabilities for each scale included in this study are strong (α=.768-.907) and each scale includes more than one indicator measure, meeting the assumption for SEM (Byrne, 2012). Pearson bivariate correlations were conducted to examine the associations between each of the indicator (observed) variables to examine associations for each latent construct in the model for the full sample (see Table S1), the Loans Paid group (see Table S2), and the Loans in Repayment group (see Table S3). Both the descriptive statistics and bivariate correlations of the study indicator variables fall within an appropriate range and are in the expected direction for each latent construct in each group.

Model Identification

I evaluated the model identification of the proposed model using a set of identification rules (Kline, 2016) to evaluate the number of unique set of model parameters using the formula $df = p - q$. The model degrees of freedom (df) equals the difference between the number of observations (unique pieces of information in the variance/covariance matrix) and the number of estimated parameters (pathways) you want to estimate. To calculate the number of observations (p) I used the following

formula v (v +1)/2, as this is an unstandardized measured variable path, where v equals the number of items (indicator variables) in the hypothesized full model (23(23+3)]/2 = 299), so p=299. The number of pathways to be estimated (q) are counted in the model (direct paths and mediation paths), so q=70. Thus, *df* equals 229 (299 unique pieces of information – 70 estimated parameters) and is considered an over-identified model because there are fewer parameters that need to be estimated than pieces of unique information contained in the model parameters that I want to estimate.

Power Analyses

As requested by the committee I conducted an additional test prior to running the SEM. I ran an a priori power analyses using the "A-priori Sample Size Calculator for Structural Equation Models" (Soper, 2020) to test for the sample size required to detect null findings for the proposed SEM model. Results showed that a total sample of 161 participants is the minimum sample size to detect effects and 110 participants is the minimum sample size for model structure required, given the anticipated effect size (0.3 medium effect size), the desired statistical power level (0.80), the total number of latent variables (e.g., 6 total: two predictors, three outcomes, one mediator), the number of observed variables (23), and the probability level (alpha = .05). Additionally, the rule of thumb is to have approximately 100 observations per group for multi-group modeling (Jaccard & Wan, 1996; Kline, 2005).

Testing Measurement Invariance

Prior to conducting a multigroup confirmatory factor analyses (CFA), it is important to examine separate CFA models for each group to determine measure invariance and to establish a baseline model for each group prior to conducting the

multigroup CFA (Byrne, 2012). I computed a CFA (e.g., measurement model) of the predictor, mediators, and outcome latent construct for each group separately. The final CFA models were acceptable fit for both models. Table S4 shows the CFA results for the Loans Paid group. I added five measurement modifications to covary specific indicator items to improve model fit based on the modification indices (MI). The resulting model fit (χ^2 (210) = 332.28, $p < 0.000$, CFI = 0.92, RMSEA = 0.07, SRMR = 0.06) was only moderately acceptable but the factor loadings were significant. In the context of the current study, the other suggestions did not make sense. Because this is a multigroup SEM test, the more parsimonious model was chosen as the most appropriate model according to the theory and the overall fit was deemed adequate (Hooper et al., 2008). Table S5 shows the results for the Loan in Repayment group. Based on the MI, I added two measurement modifications to covary specific indicator items and the final model was acceptable (χ^2 (213) = 377.92, $p < 0.000$, CFI = 0.95, RMSEA = 0.05, SRMR = 0.05).

Testing SEM Models Separately by Group

Prior to testing the multigroup SEM, I tested whether the theoretical model was reasonable based on the goodness-of-fit statistics for each group separately, running first the reduced model without mediation and then the full model with mediation. Table S4 shows the results for the Loans Paid group and Table S5 shows the results for the Loans in Repayment group. Results of the chi-square difference test was statistically significant indicating that the full model (with mediation) compared to the reduced model (no mediation) was a better fit of the data: Loans Paid group $\Delta\chi^2_{(117)}$=170.80, p<.000 and Loans in Repayment group $\Delta\chi^2_{(117)}$=243.64, p<.000. For the Loan Paid group, the reduced

model (χ^2 (94) = 164.89, p < 0.000, CFI = 0.94, RMSEA = 0.08, SRMR = 0.06) and the full model (χ^2 (211) = 335.69, p < 0.000, CFI = 0.92, RMSEA = 0.07, SRMR = 0.07) was only moderately acceptable according to the goodness-of-fit model guidelines, but none of the MI made theoretical sense. However, because this is a multigroup SEM test, the indices were close to the acceptable range and the structural model followed the guiding theory, I deemed the overall fit adequate (Hooper et al., 2008). Both of the covariates (Family income & Current income) were not significant and worsened model fit in both the full and reduced model and were removed from the final model for parsimony. For the Loans in Repayment group, both the reduced model (χ^2 (97) = 165.55, p < 0.000, CFI = 0.97, RMSEA = 0.05, SRMR = 0.04) and the full model (χ^2 (214) = 409.19, p < 0.000, CFI = 0.94, RMSEA = 0.06, SRMR = 0.07) met the goodness-of-fit model guidelines. For both models, none of the modification indices made theoretical sense. One of the covariates (Family Income, p=0.019) was significant and one was not (Participants' current income) in both the full and reduced model. However, including Family Income worsened model fit, thus the covariate was removed for parsimony.

Supplemental Material Tables

Table S1

Study 2: Means, Standard Deviations, Sample Size, and Bivariate Correlations Among Indicator Variables of Latent Constructs for Full Sample (N=323)

Observed Variable	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23
1. MIL1	1																						
2. MIL2	.736**	1																					
3. MIL3	.660**	.774**	1																				
4. MIL4	.760**	.786**	.694**	1																			
5. MIL5	.529**	.535**	.474**	.592**	1																		
6. SE1	.418**	.465**	.434**	.486**	.332**	1																	
7. SE2	.340**	.440**	.364**	.441**	.375**	.558**	1																
8. SE3	.408**	.423**	.397**	.399**	.321**	.553**	.617**	1															
9. SE4	.331**	.414**	.372**	.482**	.383**	.453**	.695**	.544**	1														
10. SEF1	.144**	.118*	.111*	.170**	.162**	.225**	.301**	.223**	.338**	1													
11. SEF2	.174**	.188**	.145**	.205**	.120*	.222**	.298**	.252**	.339**	.641**	1												
12. SEF3	.183**	.167**	.135*	.190**	.195**	.189**	.259**	.296**	.280**	.384**	.592**	1											
13. JS1	.279**	.333**	.240**	.423**	.338**	.283**	.439**	.268**	.485**	.186**	.191**	.161**	1										
14. JS2	.239**	.332**	.256**	.373**	.281**	.232**	.388**	.293**	.394**	.217**	.243**	.217**	.631**	1									
15. JS3	.272**	.336**	.279**	.379**	.276**	.317**	.421**	.365**	.490**	.285**	.280**	.221**	.558**	.482**	1								
16. FS1	.182**	.242**	.149**	.269**	.149**	.245**	.495**	.347**	.564**	.490**	.494**	.332**	.524**	.416**	.430**	1							
17. FS2	.145**	.131*	.089	.159**	.154**	.187**	.361**	.313**	.444**	.543**	.485**	.376**	.348**	.357**	.319**	.662**	1						
18. FS3	.193**	.203**	.173**	.231**	.202**	.258**	.339**	.376**	.381**	.304**	.326**	.332**	.269**	.277**	.158**	.510**	.580**	1					
19. LS1	.443**	.540**	.488**	.556**	.426**	.499**	.675**	.531**	.764**	.362**	.318**	.275**	.505**	.474**	.540**	.561**	.441**	.392**	1				
20. LS2	.388**	.425**	.401**	.450**	.359**	.484**	.580**	.485**	.682**	.339**	.348**	.280**	.491**	.423**	.524**	.550**	.486**	.362**	.766**	1			
21. LS3	.433**	.456**	.457**	.551**	.430**	.452**	.656**	.491**	.763**	.309**	.273**	.212**	.522**	.425**	.498**	.525**	.412**	.348**	.755**	.750**	1		
22. LS4	.353**	.412**	.413**	.471**	.369**	.424**	.586**	.490**	.654**	.239**	.222**	.198**	.414**	.315**	.382**	.497**	.402**	.336**	.680**	.665**	.757**	1	
23. LS5	.377**	.374**	.386**	.442**	.333**	.478**	.539**	.475**	.600**	.221**	.217**	.185**	.389**	.306**	.364**	.453**	.343**	.341**	.619**	.600**	.649**	.653**	1
Mean	4.70	4.61	5.24	4.73	5.34	3.88	3.60	3.80	3.45	4.08	3.54	2.93	3.70	4.00	3.59	2.90	3.52	3.02	3.29	3.55	3.66	3.62	3.17
SD	1.539	1.543	1.404	1.574	1.764	0.972	1.005	0.858	0.984	1.056	1.134	1.211	1.221	1.102	1.177	1.241	1.188	1.273	1.053	0.956	1.030	1.119	1.262
n	322	321	321	322	320	323	323	322	323	322	321	322	323	323	323	323	323	322	322	322	322	322	322

Note. SD=Standard Deviation; *n*=Sample Size; MIL=Meaning in Life; SE=Self-esteem; SEF=Financial Self-efficacy; JS=Job Satisfaction; FS=Financial Satisfaction; and LS=Life Satisfaction.
* $p < .05$. ** $p < .01$.

Table S2

Study 2: Means, Standard Deviations, Sample Size, and Bivariate Correlations Among Indicator Variables of Latent Constructs for Loans Paid group (n=96)

Observed Variable	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23
1. MIL1	1																						
2. MIL2	.768**	1																					
3. MIL3	.759**	.842**	1																				
4. MIL4	.830**	.810**	.767**	1																			
5. MIL5	.490**	.536**	.483**	.490**	1																		
6. SE1	.382**	.441**	.433**	.470**	.328**	1																	
7. SE2	.316**	.532**	.448**	.457**	.448**	.589**	1																
8. SE3	.305**	.376**	.353**	.299**	.312**	.528**	.679**	1															
9. SE4	.379**	.572**	.495**	.526**	.405**	.539**	.791**	.632**	1														
10. SEF1	.191	.256*	.214*	.243*	.364**	.239*	.273**	.145	.320**	1													
11. SEF2	.124	.211*	.191	.187	.174	.153	.170	.214*	.304**	.515**	1												
12. SEF3	.147	.208*	.144	.156	.227*	.146	.220*	.300**	.252*	.268**	.619**	1											
13. JS1	.222*	.309**	.141	.440**	.209*	.288**	.463**	.278**	.525**	.266**	.235*	.134	1										
14. JS2	.148	.190	.103	.255*	.128	.091	.326**	.166	.306**	.130	.198	.140	.501**	1									
15. JS3	.146	.274**	.198	.280**	.194	.218*	.344**	.311**	.473**	.310**	.290**	.233*	.476**	.388**	1								
16. FS1	.117	.269**	.138	.356**	.193	.288**	.525**	.320**	.621**	.429**	.512**	.266**	.703**	.350**	.491**	1							
17. FS2	.133	.248*	.081	.129	.239*	.164	.372**	.423**	.461**	.482**	.393**	.341**	.337**	.162	.282**	.512**	1						
18. FS3	.347**	.373**	.257*	.358**	.213*	.355**	.439**	.465**	.461**	.227*	.298**	.262*	.424**	.174	.226*	.491**	.619**	1					
19. LS1	.509**	.680**	.615**	.576**	.429**	.563**	.742**	.565**	.762**	.243*	.287**	.179	.516**	.353**	.409**	.536**	.328**	.486**	1				
20. LS2	.488**	.568**	.565**	.488**	.486**	.550**	.643**	.582**	.704**	.313**	.388**	.297**	.445**	.292**	.471**	.495**	.430**	.485**	.745**	1			
21. LS3	.476**	.590**	.581**	.606**	.482**	.545**	.748**	.534**	.767**	.236*	.159	.123	.516**	.294**	.425**	.478**	.314**	.419**	.750**	.740**	1		
22. LS4	.353**	.519**	.439**	.495**	.456**	.593**	.765**	.611**	.720**	.214*	.149	.115	.473**	.238*	.365**	.500**	.331**	.388**	.698**	.672**	.815**	1	
23. LS5	.419**	.435**	.404**	.448**	.348**	.535**	.571**	.488**	.646**	.271**	.171	.049	.417**	.221*	.280**	.423**	.286**	.397**	.597**	.583**	.701**	.733**	1
Mean	4.78	4.65	5.24	4.74	5.35	3.95	3.73	3.97	3.65	4.28	3.67	3.02	3.75	4.14	3.74	3.28	3.94	3.29	3.59	3.75	3.76	3.82	3.35
SD	1.510	1.556	1.486	1.531	1.752	1.099	1.051	0.814	1.124	0.919	1.143	1.271	1.223	1.120	1.172	1.246	1.034	1.360	1.072	1.005	1.122	1.196	1.248
n	95	95	95	95	94	96	96	96	96	95	95	95	96	96	96	96	96	96	96	96	96	96	96

Note. SD=Standard Deviation; *n*=Sample Size; MIL=Meaning in Life; SE=Self-esteem; SEF=Financial Self-efficacy; JS=Job Satisfaction; FS=Financial Satisfaction; and LS=Life Satisfaction.
* $\rho < .05$. ** $\rho < .01$.

Table S3

Study 2: Means, Standard Deviations, Sample Size, and Bivariate Correlations Among Indicator Variables of Latent Constructs for Loans in Repayment group (n=227)

Observed Variable	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23
1. MIL1	1																						
2. MIL2	.723**	1																					
3. MIL3	.618**	.743**	1																				
4. MIL4	.733**	.777**	.663**	1																			
5. MIL5	.545**	.535**	.471**	.633**	1																		
6. SE1	.438**	.480**	.436**	.497**	.337**	1																	
7. SE2	.349**	.398**	.324**	.437**	.346**	.540**	1																
8. SE3	.446**	.444**	.421**	.440**	.328**	.570**	.587**	1															
9. SE4	.308**	.336**	.309**	.471**	.379**	.396**	.641**	.496**	1														
10. SEF1	.124	.069	.074	.148*	.095	.220**	.305**	.233**	.338**	1													
11. SEF2	.192**	.177**	.125	.213**	.098	.255**	.349**	.258**	.350**	.684**	1												
12. SEF3	.197**	.148*	.131*	.205**	.181**	.210**	.274**	.290**	.291**	.428**	.578**	1											
13. JS1	.301**	.343**	.285**	.416**	.390**	.281**	.428**	.262**	.469**	.157*	.171*	.172**	1										
14. JS2	.274**	.393**	.328**	.421**	.346**	.302**	.411**	.335**	.434**	.240**	.257**	.249**	.687**	1									
15. JS3	.321**	.362**	.317**	.420**	.310**	.366**	.450**	.377**	.495**	.269**	.270**	.211**	.592**	.518**	1								
16. FS1	.204**	.232**	.158*	.240**	.134*	.218**	.474**	.335**	.521**	.500**	.480**	.358**	.454**	.436**	.394**	1							
17. FS2	.143*	.089	.096	.175**	.129	.192**	.349**	.249**	.424**	.548**	.515**	.391**	.358**	.420**	.320**	.699**	1						
18. FS3	.121	.122	.133*	.177**	.199**	.197**	.278**	.321**	.318**	.321**	.330**	.363**	.196**	.316**	.113	.501**	.555**	1					
19. LS1	.418**	.487**	.440**	.561**	.434**	.468**	.642**	.502**	.761**	.388**	.320**	.315**	.507**	.524**	.592**	.548**	.452**	.322**	1				
20. LS2	.343**	.361**	.325**	.439**	.307**	.446**	.544**	.431**	.663**	.337**	.321**	.267**	.515**	479**	.541**	.560**	.492**	.280**	.769**	1			
21. LS3	.413**	.393**	.395**	.531**	.408**	.396**	.606**	.470**	.761**	.335**	.323**	.254**	.526**	.487**	.530**	.546**	.451**	.301**	.763**	.755**	1		
22. LS4	.351**	.364**	.404**	.466**	.333**	.326**	.492**	.427**	.609**	.237**	.246**	.234**	.387**	.345**	.382**	.481**	.415**	.293**	.663**	.654**	.724**	1	
23. LS5	.358**	.348**	.381**	.443**	.328**	.450**	.520**	.462**	.574**	.192**	.228**	.241**	.376**	.336**	.391**	.455**	.349**	.303**	.623**	.602**	.624**	.611**	1
Mean	4.66	4.60	5.24	4.73	5.34	3.85	3.55	3.72	3.37	4.00	3.48	2.89	3.68	3.95	3.52	2.74	3.35	2.91	3.16	3.47	3.61	3.54	3.09
SD	1.553	1.541	1.372	1.595	1.772	0.914	0.983	0.868	0.909	1.099	1.128	1.185	1.222	1.092	1.176	1.207	1.207	1.219	1.020	0.924	0.988	1.075	1.263
n	227	226	226	227	226	227	227	226	227	227	226	227	227	227	227	227	227	226	226	226	226	226	226

Note. SD=Standard Deviation; *n*=Sample Size; MIL=Meaning in Life; SE=Self-esteem; SEF=Financial Self-efficacy; JS=Job Satisfaction; FS=Financial Satisfaction; and LS=Life Satisfaction.
* $p < .05$. ** $p < .01$.

Table S4

Summary of CFA and SEM Goodness-of-Fit Model Fit Indices for Loans Paid Group (n=96)

Model	χ^2	df	CFI	RMSEA	SRMR
Initial CFA Model (No Constraints)	386.51***	215	0.893	0.091	0.075
Modification 1 (FSAT3 WITH FSAT2)	367.37***	214	0.904	0.086	0.077
Modification 2 (PM4 WITH PM1)	354.16***	213	0.912	0.083	0.076
Modification 3 (EFF3 WITH EFF2)	346.97***	212	0.916	0.081	0.070
Modification 4 (LSAT2 WITH LSAT4)	335.89***	211	0.920	0.081	0.070
Modification 5 (LSAT1 WITH LS)	332.28***	210	0.924	0.078	0.069
Final CFA Model	332.28***	210	0.924	0.078	0.069
Reduced SEM Model (no mediation)	164.89***	94	0.936	0.089	0.067
Full SEM Model (mediation)	335.69***	211	0.922	0.078	0.079

Note. CFA= Confirmatory Factor Analysis; SEM=Structural Equation Model; df=Degrees of Freedom; CFI=Comparative Fit Index; SRMR=Standardized Root Mean Square Residual; and RMSEA=Root Mean Square Residual. ***$p < .000$.

Table S5

Study 2: Summary of CFA and SEM Goodness-of-Fit Model Fit Indices for Loans In Repayment Group (n=227)

Model	χ^2	df	CFI	RMSEA	SRMR
Initial CFA Model (No Constraints)	420.54***	215	0.939	0.065	0.052
Modification 1 (EST3 WITH EST1)	396.84***	214	0.945	0.061	0.052
Modification 2 (PM3 WITH PM2)	377.92***	213	0.951	0.058	0.051
Final CFA Model	377.92***	213	0.951	0.058	0.051
Reduced SEM Model (no mediation)	165.55***	97	0.971	0.056	0.041
Full SEM Model (mediation)	409.19***	214	0.942	0.063	0.077

Note. CFA= Confirmatory Factor Analysis; SEM=Structural Equation Model; df=Degrees of Freedom; CFI=Comparative Fit Index; SRMR=Standardized Root Mean Square Residual; and RMSEA=Root Mean Square Residual. ***$p < .000$.